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GENERAL CATALOGUE OF

* Ornamental *

Trees & Fruits



Shrubs * Vines

Roses * Plants

Spray Calendar & Formulas

THE CASS NURSERIES

High-Grade Nursery Stock

GENEVA, NEW YORK

Illustrated Catalogue of
**ORNAMENTAL
TREES**



FRUITS · SHRUBS
and **PLANTS**

*Together with Valuable Hints on the Selection,
Propagation and Care of Stock. Spray
· Calendar and Formulas ·*

INTRODUCTION

IN presenting this catalog to our customers we have the satisfaction of saying that we believe it to be the most complete in its list of what is desirable and obtainable in both fruits and ornamentals ever issued. With the assistance and advice of many of the leading growers and dealers throughout an extended area in this latitude undesirable and unobtainable varieties have been omitted. All descriptions have been re-read and corrected where necessary to conform to the results of experience. Many new or hitherto uncataloged varieties have been added, and we feel sure that every reasonable requirement of our numerous patrons is here supplied.

We give special attention to the propagation of varieties that will come true to name, endeavoring to protect ourselves and our customers from error and imposition. We feel safe, therefore, in offering our stock as being what it is represented to be. All packing and shipping is given personal supervision and, still further to protect our patrons against loss, only skilled and competent men are employed.

Our lands are well adapted to the growing of the varieties handled by us and this fact together with thorough cultivation and care makes for health, vigor, and maturity in all that we grow.

Before setting out any nursery stock careful reading of pages 44 to 47 of this catalog will be of benefit. It is well to understand that nursery stock is perishable and demands careful attention after being received from the nursery. Persons who handle nursery stock intelligently seldom have any cause for complaint. We request you to read the directions on "Transplanting Trees and Shrubs."



Fruit Department

APPLES

THERE are but few parts of the United States where apples can not be grown. They are planted from 30 to 40 feet apart, depending on the tree growth made by the variety. In commercial orchards, the fewer varieties in one planting, the better. In home orchard plantings the assortment may be as large as desired. The apples described below are the best known sorts. Their value has been proved, and they will produce fine fruit in proper abundance.

SUMMER VARIETIES

- ✓ **Early Harvest**—Medium size, straw color; tender, sub-acid. August.
- ✓ **Early Strawberry**—Medium; roundish; finely striped and stained with deep red; flesh white, slightly tinged with red next the skin, tender, sub-acid, with an agreeable aroma. Tree a moderate, erect grower, and a good bearer. Middle to end of August.
- ✓ **Golden Sweet**—Large; pale yellow; very sweet and good. August.
- ✓ **Red Astrachan**—Large, deep crimson, juicy; rich, acid; August.
- ✓ **Red June**—Medium; deep red; flesh tender, juicy, sub-acid flavor. Tree vigorous, an early and abundant bearer. August.
- ✓ **Sweet Bough**—Large; pale yellow; tender and sweet. August to September.
- ✓ **Yellow Transparent**—Very early; color, pale yellow. July and August.

AUTUMN VARIETIES

- ✓ **Alexander**—Large, uniform; mild sub-acid. Tree upright, vigorous. September.
- ✓ **Duchess of Oldenburg**—Medium size; yellow, streaked with red; juicy, with rich, sub-acid flavor. September.
- ✓ **Fall Pippin**—Large, yellow; tender, juicy and rich. October.
- ✓ **Fameuse** (Snow Apple)—Medium deep crimson. Very handsome; flesh snowy white, tender, melting, juicy. November.
- ✓ **Gravenstein**—Large, striped; tender, juicy and high flavored. September.
- ✓ **Maiden's Blush**—Medium size; pale yellow with beautiful red cheek. September and October.
- ✓ **McIntosh Red**—Medium size; nearly covered with dark red; flesh white, fine, very tender, juicy. December.
- ✓ **Pound Sweet**—Very large, round, greenish; sweet, rich and tender; excellent for baking. October and November.
- ✓ **Twenty Ounce**—Very large; nearly round; yellow, striped with red; of fair quality; tree a vigorous, spreading grower, and a fine bearer. Excellent for baking. Very popular in the markets. October to January.
- ✓ **Wealthy**—Free growth; medium; dark red; juicy, vinous, sub-acid; good; very hardy, Ripening October to January.

WINTER VARIETIES

Baldwin—Large, bright red; juicy, crisp, sub-acid. One of the most popular winter apples. January to April.

Ben Davis—A leading commercial variety. Tree hardy, healthy, vigorous. Fruit large, handsomely colored, attractive. January to June.

Bismarck—Is making a wonderful record for hardiness and special earliness of fruiting. Two-year trees seldom fail to produce fruit. Tree is of stocky, short growth. Fruit golden yellow, splashed with red; flesh tender, pleasant, sub-acid. Will keep into March.

Black Ben Davis—Brilliant in color, attractive in appearance, deep red. Good keeper. Tree vigorous. January to April.

Delicious—Esteemed as a long keeper and valuable market fruit. Fruit large, roundish; skin greenish yellow, much shaded with light and dark red and sprinkled with brown dots; flesh yellowish, juicy, mild sub-acid. January to May.

Fallawater—Very large, globular; yellowish green, dull red cheek; juicy, crisp, pleasant sub-acid flavor. December.

Gano—A variety of the Ben Davis type. Fruit medium to large, light yellow in color and of good flesh and flavor. Season about the same as Ben Davis.

Golden Russet—Vigorous growth; medium; russet; crisp, juicy, mild sub-acid; hardy; very good; long keeper. Ripening November to April.

Grimes' Golden—Medium to large; cylindrical; golden yellow; flesh crisp, tender, juicy sprightly; very good to best. Tree hardy, vigorous, productive, bears early. January to April.

Hendrick Sweet (Sweet Winesap)—Fruit medium, round oblate; color red, splashed with deep crimson; flesh tender, juicy, very sweet and rich. November to May.

Hubbardston—Large, striped yellow and red; tender, juicy. An excellent variety for

commercial planting, being one of the most profitable varieties of its season. October.

Jonathan—Medium growth. Red and yellow; tender, juicy, and rich. Very productive. One of the best for table or market.

King (Tompkins County)—Largest size; oblate, yellowish grounded striped and covered with bright red; fragrant, spicy smelling; flesh very crisp, tender, rich, fine flavor, sub-acid. A superb apple. November to April.

Mammoth Black Twig—Greenish yellow covered with deep red, obscurely striped. Flesh yellow, very firm, juicy, good quality. A very late keeper. December to May.

Mann—Vigorous growth; medium to large; deep yellow; juicy, mild, pleasant, sub-acid; hardy. Ripening January to April.

Newton Pippin (Albemarle)—Medium to large, yellow; very firm, crisp, juicy, with a highly delicious sub-acid flavor. A very late keeper. November to June.

Northern Spy—Vigorous growth; large; striped red; tender, juicy, mild, sub-acid; very good; a fine dessert fruit. Ripening December to June.

Northwestern Greening—An attractive apple of green or yellowish color. Popular in the northern portion of the apple belt where hardy apple is desired. Fruit large to very large with mild sub-acid flavor.

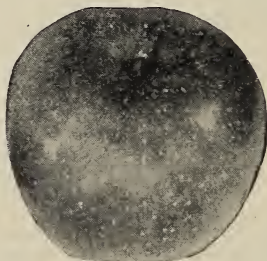
Opalescent—An annual bearer of beautiful, high quality fruit. Size large; color light, shading to a very dark crimson, and susceptible to a very high polish; hence, its name. Ripening December to March.

Pewaukee—Vigorous growth; large; bright yellow with red; tender, juicy, sub-acid; good; very hardy. Ripening January to May.

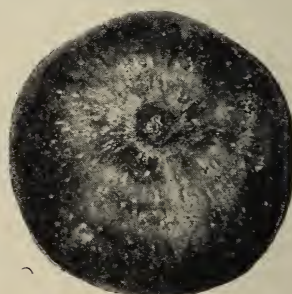
Rambo—A fine flavored apple for home orchards. Does not keep well for commercial purposes. Fruit medium size. November.



SPY



GREENING



KING

✓ **Rhode Island Greening**—Large greenish yellow; tender, juicy and rich, with rather an acid flavor. December to April.

✓ **Rome Beauty**—Large; yellow and bright red; flesh yellowish, tender, juicy, sub-acid; tree moderate grower, good bearer. December to March.

Roxbury Russet (Boston Russet)—Rather large; greenish-yellow, mostly covered with bright russet; a pleasant sub-acid flavor. January to June.

✓ **Seek-no-Further** (Westfield)—Above medium; dull red, dotted with russet; flesh white, fine grained; rich flavor, excellent. December to February.

Smokehouse—Fruit is green, blushed; above medium in size. A very pleasantly flavored dessert apple of good quality. October to February.

✓ **Spitzenburg** (Esopus)—Medium to large, deep red; flesh yellow, crisp, sub-acid, with a spicy and delicious flavor; a good bearer and a most popular variety. December to April.

Stark—Tree is thrifty, hardy, healthy, a reliable cropper and very productive. Fruit large and of a beautiful color and good flavor. January to May.

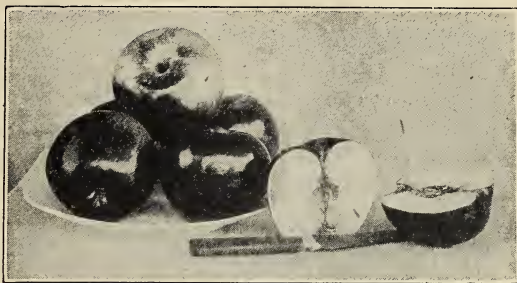


✓ **Stayman's Winesap**—Large, bright red, striped; excellent quality. Flesh firm, tender, rich, juicy, mild sub-acid. A heavy bearer. Succeeds in a great variety of soils. February to April.

✓ **Sutton Beauty**—Medium to large, roundish; handsome, waxen yellow, obscurely striped with fine crimson; flesh white, crisp, tender, juicy, sprightly sub-acid; quality fine; late keeper; tree productive. November to February.

✓ **Talman Sweet**—Medium size; pale yellow, slightly tinged with red; firm, rich and sweet; excellent for cooking; tree vigorous, very hardy and productive. November to April.

✓ **Wagner**—Medium to large; light yellow covered with deep red in the sun; firm, crisp, juicy, sub-acid; tree vigorous, upright, handsome, very productive. December to May.



McINTOSH RED

✓ **Winter Banana**—The name is most appropriate, as it has a delightful banana perfume. Fruit keeps well till spring; the color is a striking red blush on a deep yellow ground. It is of large size and very showy in appearance.

✓ **Wolf River**—A variety that has largely superseded Alexander in many localities. Tree a strong spreading grower, not an early bearer, productive in alternate years. Fruit is large, highly colored. September to December.

✓ **York Imperial**—Medium; white shaded with crimson; flesh firm, crisp, juicy, pleasant, mild, sub-acid; tree vigorous, a good bearer. A popular Pennsylvania variety. November to February.

CRAB APPLES

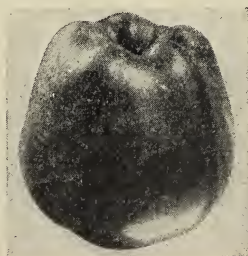
✓ **Excelsior**—Tree a strong grower, hardy and healthy. Fruit large for a crab apple and very attractive; flavor agreeable.

✓ **Hyslop**—Almost as large as Early Strawberry Apple; deep crimson; very popular on account of its large size, beauty and hardness. Vigorous. October to January.

✓ **Martha**—Resembles the Transcendent, but larger; beautiful showy fruit and bears enormously. All things considered, we doubt if it has an equal among the crabs. Vigorous. September and October.

✓ **Transcendent**—Skin yellow, striped with red; flesh crisp and juicy. An early and heavy bearer. One of the best known varieties. September and October.

✓ **Whitney**—Large, glossy green, splashed with carmine; flesh firm, juicy and flavor very pleasant; ripe latter part of August. Tree a great bearer and very hardy. August.



DELICIOUS

PLUMS

The European plums were introduced from Europe in Colonial days. They are characterized by solid meaty flesh and free stone pits. The Japan plums, as a class have a distinctive flavor. They are almost as hardy as the Europeans and thrive over a wide range of territory. Plums offer us a great range of flavor, color, form and size. We have selected the following list of the most reliable and valuable kinds.

EUROPEAN VARIETIES

✓ **Bradshaw**—Very large purplish red fruit of good quality. Very productive, and keep well. August.

✓ **Coe's Golden Drop**—One of the largest and best of the yellow plums. Juicy, sweet, well flavored. September.

✓ **Fellemburg**—Very large, purplish black. Best quality. September.

✓ **German Prune**—Purple, juicy, rich, fine quality. September.

✓ **Gucii**—Very large, deep purple; flesh yellowish, sweet; hardy. September.



LOMBARD



BRANCH OF BURBANK

✓ **Imperial Gage**—Fruit large, oval, skin pale green, flesh juicy, sweet, rich and excellent. Vigorous. Middle of August.

✓ **Lombard** (Bleecker's Scarlet)—Medium size; violet red; juicy, pleasant and good; adheres to the stone; productive. A valuable market variety; one of the most hardy and popular. Middle of August.

✓ **Moore's Arctic**—Medium, dark purple, thin skin; fine flavor; a great bearer, extremely hardy. September.

✓ **Reine Claude**—Large, nearly round; pale yellow, marked with red; juicy, melting and excellent; good bearer. Not liable to rot. First of September.

✓ **Shipper's Pride**—Very large, dark purple, juicy, sweet, fine quality. Hardy and productive. September.

✓ **Shropshire Damson**—A medium sized, dark purple variety; esteemed for preserving. Very productive. October.

✓ **Yellow Egg**—Large, yellow; juicy and rich. Productive and vigorous. August.

JAPAN VARIETIES

✓ **Abundance**—The tree comes into bearing remarkably young, and yields abundantly. The fruit is full medium size, color a rich, bright cherry red; flesh light yellow, juicy and tender. Vigorous. Last of July.

✓ **Burbank**—A plum of deeper color and ripening later than the Abundance. The fruit is large, clear cherry red with a thin lilac bloom; flesh a deep yellow, very sweet, with a very agreeable flavor; begins to bear second year after transplanting. August.

✓ **Chabot or Yellow Japan**—Very large; tapering; color bright red purple, on a yellow ground; very showy. Blooms two weeks later than Abundance, thus escaping the spring frosts and a most abundant bearer. Ripens a little later than Burbank.

✓ **October Purple**—Reddish purple color. Flesh yellow and superb in quality. Ripens about middle of September.

✓ **Red June**—An early ripening plum; medium to large, roundish, conical, purplish red, handsome; flesh yellow, quality good.

✓ **Satsuma**—A fine, large Japanese plum. The flesh is solid, purplish crimson color from pit to skin, juicy, fine quality. Pit very small little larger than a cherry stone. September.

✓ **Wickson**—The tree grows in vase form, sturdy and upright. The stone is small and the flesh is of fine texture, firm, sugary and delicious. Ripens about September first.

SWEET CHERRIES

HEART AND BIGARREAU

✓ **Bing**—One of the most delicious sweet cherries. Fruit is large, black, and of very fine quality.

✓ **Black Tartarian**—Very large, bright purplish black; half tender, juicy, very rich, excellent flavor; productive. Free. First or middle of July.

✓ **Dikeman**—The latest ripening Sweet Cherry known; hence, after other sorts are gone, it commands highest price. Black, good size, and in texture reminds one of the cherries from the Pacific slope, being meaty and solid.

✓ **Gov. Wood**—One of the best cherries; very large; light yellow marbled with red; juicy, rich and delicious. Tree healthy and a great bearer. Hangs well on the tree. Vigorous. Last of June.

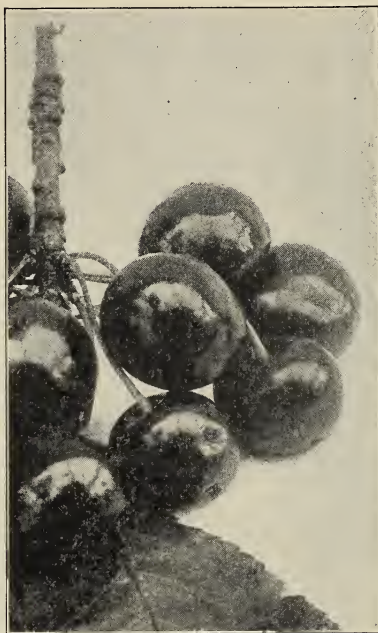
✓ **Lambert**—Largest size, firm, rich and juicy. purplish red, almost black when ripe.

✓ **Napoleon Bigarreau**—Very large, pale yellow or red; very firm, juicy and sweet; very productive; one of the best. Vigorous. First of July.

✓ **Rockport Bigarreau**—Large, amber and light red; half tender, sweet, rich and excellent. Tree vigorous, erect, beautiful and productive. Last of June and first of July.

✓ **Schmidt's Bigarreau**—Remarkably hardy and productive. Fruit of the largest size; a deep mahogany color; flesh dark, tender, juicy with a fine rich flavor. July.

✓ **Windsor**—Fruit large; liver colored; flesh remarkably firm, of fine quality. Tree hardy



BLACK TARTARIAN

and prolific. Vigorous. Middle of July.

Yellow Spanish—Large, pale yellow, with red cheek; firm, juicy and excellent; one of the best light colored cherries; productive. Free. Last of June.

SOUR CHERRIES—DUKE AND MORELLO

✓ **Baldwin**—Fruit large, very dark transparent wine color; flavor slightly acid yet the sweetest and richest of the Morello type. Unexcelled in earliness, quality and productiveness.

✓ **Dyehouse**—A very early and sure bearer; ripens a week before the Early Richmond, of better quality and quite as productive. June.

✓ **Early Richmond**—Medium size; dark red; melting, juicy, sprightly, acid flavor. This is unsurpassed for cooking purposes, and is exceedingly productive. Free. June.

✓ **English Morello**—Medium to large; blackish red; rich, acid, juicy and good; very productive. August.

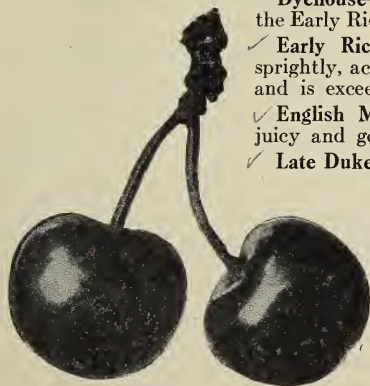
✓ **Late Duke**—Similar to May Duke, ripening 2 or 3 weeks later.

✓ **May Duke**—Large, dark red, juicy and rich; an old, excellent variety; productive. Middle of June.

✓ **Montmorency**—A large red, acid cherry, larger than Early Richmond and fully ten days later. Very profitable. Last of June.

✓ **Olivet**—A large, globular, very shining, deep red sort. The flesh is red; with a rose-colored juice, tender, rich and vinous, with a very sweet sub-acidulous flavor. Early June.

✓ **Ostheim**—Medium size, very dark red highly flavored. Bears heavily. August.



MONTMORENCY

✓ **Wragg**—Very hardy. Fruit dark, juicy and rich. Tree a dwarf but vigorous grower and very prolific. Nearly like English Morello.

PEAR TREES

Pears should be picked from the tree while "hard ripe," and allowed to mellow up in the house. If they become mellow on the tree they are practically worthless. Keep them in a clean box till ripe. If you wish to retard the ripening, keep in a cool place. A cool dry cellar is best. Standard pears thrive on almost any moderately rich soil; well drained heavy loam is best.

SUMMER VARIETIES

Bartlett—Large size; buttery, very juicy and high flavored; very popular. September.

Clapp's Favorite—Large size; flesh fine grained, melting, rich and buttery; earlier than Bartlett. August.

Flemish Beauty—Large, juicy, melting, rich and fine; good bearer; hardy everywhere. September and October.

Koonce—Medium to large, handsome; yellow; flesh juicy, sweet, spicy, good. Ripens with the earliest. Tree a strong grower, hardy, and productive. August.

Osband Summer—Medium size; clear yellow with red cheek. Flesh melting and sweet. August.

Wilder—Small to medium; yellow, with red cheek; handsome; sweet, delicious. August.



ANJOU

AUTUMN AND WINTER

Beurre Anjou—A large, handsome pear; buttery and melting, with sprightly, vinous flavor. Keeps until the winter holidays. Considered the best pear.

Beurre Bosc—A large and beautiful russety pear; very distinct, with a long neck; high flavored and delicious. September and October.

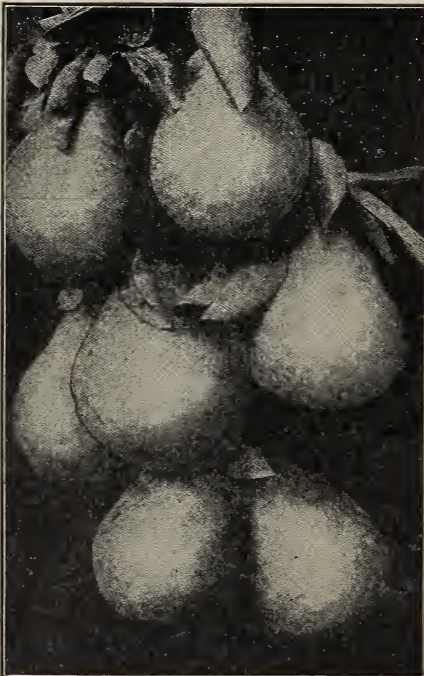
Beurre Clairgeau—Very large, tender and juicy, abundant bearer. Valuable market fruit.

Duchess d'Angouleme—Very large; of a greenish yellow, with patches of yellow and a dull red cheek. It attains its greatest perfection as a dwarf. October and November.

Garber—One of the Japan Hybrids; earlier and larger than Kieffer; hardy, productive, early bearer. September and October.

Howell—Large, sometimes with a short neck. Greenish yellow. Grows a large proportion of fine fruit. October.

Kieffer—Very large, bell shaped; light yellow, sometimes with a slight blush; flesh white, crisp, juicy, of slightly quince flavor; of fair quality; exceedingly valuable for cooking or canning, which brings out its best spicy flavor. October to December.



LAWRENCE PEARS

Lawrence—Above medium size, yellow, tender and melting, quality best. Mid-winter.

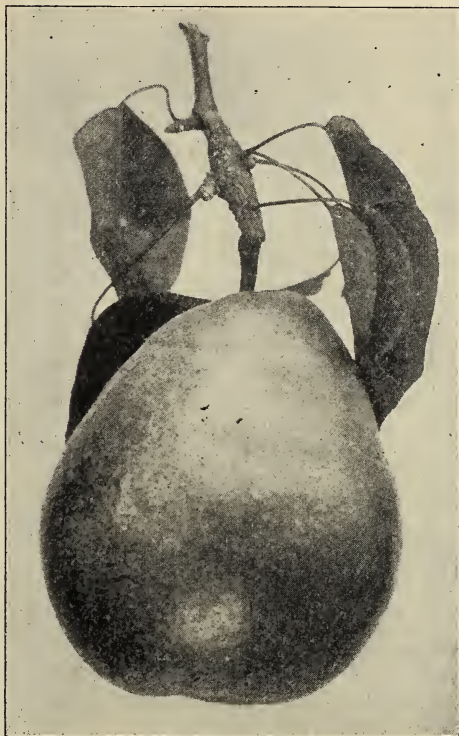
Sheldon—Large size; roundish; greenish yellow, mostly covered with thin, light russet; very juicy, melting, sweet and vinous. October and November.

Seckel—Small size; yellowish russet, with a red cheek. The richest and finest variety known. September and October.

Vermont Beauty—A beautiful pear; of medium size; round, skin yellow, nearly covered with carmine, flesh melting, sprightly, very good. Tree hardy, healthy and very productive. October.

Winter Nelis—A delicious greenish yellow pear; fine grained, juicy and much sought for in markets. November.

Worden Seckel—A seedling of Seckel. Fruit medium size, borne in clusters, juicy, buttery, fine-grained, with a flavor and aroma fully equal to that of its parent, which it surpasses in size, beauty, and keeping qualities. Ripens in October, but will keep in good condition till December.



CLAPP'S FAVORITE

DWARF PEAR TREES

Dwarf pears are secured by budding on quince roots. This introduces a smaller growing tree, and brings it into bearing much younger than the standard pear trees. The trees never become of large size, but the fruit is the same as though it were on a standard tree. These trees will often begin to bear fruit the second year after they are planted. Many growers believe the fruit of these trees is larger and finer in quality than produced by the larger trees. To be used where space is limited, and they may be planted like a hedge row. We offer the following varieties as dwarfs.



BARTLETT

- | | |
|------------|-----------|
| ✓ Anjou | ✓ Duchess |
| ✓ Bartlett | ✓ Kieffer |
| ✓ Clapp | ✓ Seckel |

PEACH TREES

PEACH FRUIT is produced on wood of the last season's growth, hence the necessity for keeping up a good supply of vigorous annual shoots all over the tree. Keep the ground clean and mellow around the trees. Keep the heads low—the trunk ought not to exceed 3 feet in height. Every spring prune and shorten the shoots of the previous year's growth; keeping the head round, full, and well furnished with bearing wood. Cut weak shoots back about one-half, strong ones, one-third; but see that you have a sufficient supply of fruit buds.

PEACH VARIETIES

Admiral Dewey—A perfect freestone, of fine size, form and color, with delicious yellow flesh that is yet firm enough to ship well. The tree is a strong, hardy, symmetrical grower and produces well. Freestone. July.

Alexander—Ripens very early. Large; color deep maroon, handsomely shaded; flesh firm, rich and good; most excellent shipper; freestone. Middle to last of July.

Belle of Georgia—A very large peach of exceptionally high quality, resembling Elberta in shape, with white skin and flesh and handsome red cheeks. Free. September.

Carman—A new, hardy, rot-proof peach. Large, round; pale yellow skin and red blush on sunny side; white flesh, sweet flavor.

Chair's Choice—Large, deep yellow, red cheek; firm. October 1st.

Champion—Handsome creamy white with red cheek. It is of large size and of very superior flavor. Ripens about August 1, and has shown that it bears a full crop when others fail.

Crawford's Early—This very beautiful and best of yellow peaches is highly esteemed. Fruit very large, skin yellow, with a fine red cheek; flesh yellow, juicy, sweet and excellent. Freestone. Last of August.

Crawford's Late—Fruit of the largest size; skin yellow, or greenish yellow, with dull red cheek; flesh yellow; productive. One of the finest late sorts. Freestone. Last of September.



FITZGERALD

Crosby—A beautiful yellow freestone peach with very small pit. Excellent flavor, large size, color orange-yellow, with carmine on the sunny side. Very beautiful; ripens between early and late Crawford.

Elberta—A seedling of Chinese Cling but entirely free. Large; yellow with red cheek; juicy and of high quality; flesh yellow and melting. Ripens after Early Crawford. Freestone.

Fitzgerald—A native seedling, as large or larger than Crawford; freestone, very best quality. A heavy bearer, fruiting very young, almost invariably the second year after planting. Very hardy. Ripens just after Crawford's Early.

Foster—Large, resembling Crawford's Early but of better quality. Early September.

✓ **Globe**—Fruit exceedingly small, globular in form, of a rich golden yellow with a red blush; flesh very firm, juicy, yellow shaded with red tinge toward the pit. Freestone. Middle of September.

✓ **Greensboro**—Ripens with Alexander, but is twice the size of that variety. Bright red on a yellow ground. It ripens perfectly to the pit, from which it parts freely when matured. Flesh white, juicy and good. July.

✓ **Hiley**—Probably the best white peach of its season. Large handsomely colored fruit with distinct pleasant flavor. Very productive. Free. August.

✓ **J. H. Hale**—Fruit fully one-half larger than Elberta. Color a deep golden yellow overlaid with bright carmine; smooth, solid thick skin; flesh deep yellow, fine grained, firm and as solid as a cling, yet parting freely from the pit. A peach without the fuzz and distinctive in every respect.

✓ **Iron Mountain**—Fruit very large, white, freestone, quality good. Very hardy in bud. White inside at pit. September.

✓ **Mayflower**—Productive and an early bearer. Juicy and tender for such an early peach. White flesh; freestone. Last of July.

✓ **Mountain Rose**—Very hardy, large, red, flesh white, juicy, rich and excellent; free. August.

✓ **Niagara**—Large, beautiful and luscious. It has shown complete freedom from blight and other forms of decay. Early September.

✓ **Old Mixon Free**—Large, pale yellow, with red cheek; tender, rich and good. September.

✓ **Rochester**—Very large, orange yellow, with deep red blush. Very juicy, highly flavored. Productive; freestone. Middle of August.

✓ **Salway**—Fruit large, roundish; deep yellow with red cheek, flesh yellow, juicy, rich and sugary. A good keeper. Freestone. First of October.

✓ **Smock**—Rather large, yellow with a red cheek; flesh yellow, red at the stone. Productive. October first. Freestone.

✓ **Stevens' Rareripe**—Very productive and of high color; ripens immediately after Late Crawford, and continues three weeks.

✓ **Stump**—Very large, roundish; skin white, with a bright red cheek; flesh white, juicy and good. Freestone. Last of September.

✓ **Triumph**—A strong grower and a sure and abundant bearer. Large size, and bright yellow color. Ripens early and young trees have borne over a half bushel of fruit each. August.

✓ **Wheatland**—Large; golden yellow, with crimson; juicy, sweet and of fine quality. Ripening middle of September.

✓ **Willett**—Undoubtedly one of the largest and finest peaches grown. Flesh yellow, skin covered with dark red. Season September.

✓ **Yellow St. John**—A grand peach, ripening about ten days after Hale's. Nearly as large as Crawford. Bears young and produces abundantly. August.

APRICOTS

AMERICAN VARIETIES

✓ **Harris**—Free; hardy; comes into bearing young, and very productive. Fruit large, rich golden yellow; ripens middle of July.

✓ **Montgamet**—A large, red and yellow apricot, ripening about August 10th.

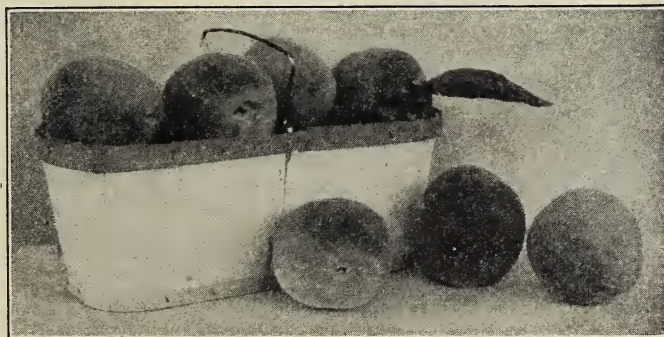
✓ **Moorpark**—One of the largest; orange, with a red cheek; firm, juicy, with a rich flavor; very productive. August.

RUSSIAN VARIETIES

✓ **Alexander**—Tree hardy; an immense bearer; fruit large, yellow, flecked with red; very beautiful, sweet and delicious. July.

✓ **Gibb**—Tree hardy and symmetrical; a good bearer; fruit medium, yellow; sub-acid, rich, juicy, the best early variety, ripening about with strawberries; last of June.

✓ **J. L. Budd**—A hardy, strong grower and profuse bearer; large, white with red cheek; sweet, juicy, extra fine, with a sweet kernel as fine flavored as the almond; the best late variety. August.



ELBERTAS

QUINCES

The Quince is highly valued for preserves, marmalades, jellies and flavoring purposes, and is worthy of more extensive planting. Thrives in warm fertile soil, and the quality of the fruit improves with cultivation.

Bourgeat—Rich golden color; smooth skin, with delicious quince odor.

Champion—Fruit very large; flesh cooks tender. Tree vigorous; bears young; season two weeks later than the Orange; keeps until January.

Meech's Prolific—Ripens between the Orange and the Champion. Bears early. Good quality and large size.

Orange—Fruit large, round, with a short neck; color bright yellow; flesh firm and tough until cooked, when it becomes tender, juicy, and of excellent flavor.

Rea's—The largest and in every respect the finest variety of the quince.

Van Deman—A fine quince, one of the largest; rich orange color, chunky shape; especially good quality; bears young.

GRAPE VINES

In trimming grape vines remember this—that the fruit is borne at the base of this year's shoots coming from wood formed last year. Pruning should be done in March, cutting off last summer's wood growth so as to leave only two or three buds, from which this year's fruit will be produced.

BLACK GRAPES

Campbell's Early—Clusters large and handsome; berries large, nearly round, black, with light purple bloom; flesh rather firm, but tender; quality rich, sweet, slightly vinous; a strong and vigorous grower; it ripens very early.

Concord—A popular variety; universally healthy, vigorous, and productive; flesh somewhat buttery, moderately juicy and sweet. Bunch large, nearly black with bloom; early. September.

Moore's Early—Combining the vigor, health and productiveness of Concord. In quality hardly to be distinguished from it. Bunch large, berries very large, black. August.

Wilder—Large; bunches generally shouldered; berry round and large; flesh buttery, with a somewhat fibrous center; sweet, rather sprightly, black. Middle of September.

Worden—Bunches large, handsome; berries large, sweet. Ten days earlier than the Concord, and superior to it in flavor; ripens well in cold localities.

RED GRAPES

Agawam (Rogers' No. 15)—Dark red or maroon; bunches compact, very large, berries large; oval, pulp soft, flavor sweet and aromatic. Ripens early; is very attractive. One of the best of the red varieties.

Brighton—Dark red. One of the most desirable of the early red grapes. Very large and handsome. Clusters under favorable conditions are more uniform than those of any other grape.

Catawba—Bunches large, shouldered; berries large, reddish and sprightly. One of the old and popular grapes, extensively planted in some sections for wine, for which it is valuable, and for its late keeping qualities.

Delaware—Superior as a table grape. Bunch medium, very compact, berries medium round; skin thin, of a beautiful dark red color when fully ripe; flesh tender and juicy, exceedingly sweet. Ripens early in September.

Salem—Chestnut color; bunch large, short, broad and compact, berry very large, round; flesh nearly free from pulp, sweet, aromatic and well flavored; vine vigorous, healthy and productive. Ripens with Concord.



WILDER GRAPE

WHITE GRAPES

✓ **Empire State**—Pale yellowish green, hardy, very juicy and tender, one of the best green table grapes.

✓ **Green Mountain** (Winchell)—Vine strong, vigorous, healthy, very hardy and productive. Bunch long, compact shoulder, green or greenish white. Skin thin. Pulp very tender and sweet. Three weeks earlier than Concord.

Moore's Diamond—It is a prolific bearer producing large, handsome, compact bunches. Color greenish white, with a rich yellow tinge

when fully ripe; few seeds, juicy. Berry about the size of a Concord. It ripens from August 25th to September 10th.

Niagara—Berries large, skin thin but tough, pale green at first, changing to pale yellow when fully ripe, with a thin white bloom; flesh pulpy, tender, sweet. Ripens with the Concord.

✓ **Pocklington**—Bunch medium to large, berry large, round, light golden yellow when fully matured; flesh pulpy, juicy. Ripens with Concord.

BLACKBERRY PLANTS

Blackberries fruit this year on canes which grew last year, and which are worthless after they have once fruited. Remove the old canes each winter.

✓ **Ancient Briton**—A vigorous, hardy variety; very productive good quality, a fine berry for the home garden.

✓ **Blower**—Large size, jet-black, good shipper, best quality, unexcelled productiveness.

✓ **Eldorado**—The vines are very hardy and vigorous, enduring the winters of the far Northwest without injury. The berries are large, jet black, borne in large clusters and ripen well together.

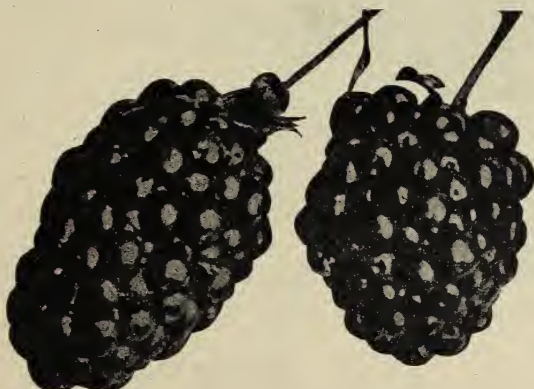
✓ **Eric**—Fruit very large, excellent quality, handsome and firm and ripens early; fruit uniform both in size and shape.



EL DORADO



MERSERSAU



BLOWERS

ANCIENT BRITON

✓ **Mersersau**—Fruit rather large size, handsome black color, juicy, sweet and good quality. Ripens early.

✓ **Rathbun**—The fruit is borne in clusters; berries very large, color intense black with a high polish; small seeds; flesh juicy, high flavored, sweet and delicious. In season medium early.

✓ **Snyder**—A marvel for productiveness; fruit medium size; sweet and melting to the core.

✓ **Taylor**—Sweet, well flavored, hardy, two weeks later than Snyder. Not quite so productive as Snyder, but one of the best late ripening sorts.

DEWBERRIES

✓ **Lucretia**—The plants are perfectly hardy and healthy, and remarkably productive. The fruit is very large, soft, sweet and luscious throughout, without any hard center or core.

RASPBERRIES

RED AND YELLOW VARIETIES

Columbian—One of the most vigorous growers of the red raspberry family. Fruit very large; shape conical, color dark red, bordering on purple. Wonderfully prolific and perfectly hardy.

Cuthbert or Queen of the Market—Fruit is large, luscious, and produced in the greatest profusion. Color deep rich crimson; fruit very firm. Ripens from July 10 to 20, and continues a long time in fruit.

Golden Queen—Fruit large; color a pure yellow; quality best. Ripens with Cuthbert.

Herbert—Fruit large, bright red, somewhat oblong, the largest of red raspberries, very hardy. Flavor sweet and juicy. Season five or six days before Cuthbert.

June—Very excellent red raspberry. A new variety propagated by N. Y. Experiment Station and recommended by them. Good both for canning and table use.

London—Large fruit, dark crimson, good quality.

✓ **Marlboro**—Color a bright crimson and, unlike others, does not lose its brilliancy when over ripe; of a good quality and very prolific.

✓ **St. Regis**—One of the greatest raspberries ever introduced. Plants of the St. Regis put out in the Fall or early April gave ripe berries on the 20th of June. For four weeks thereafter the yield was heavy and the canes continued to produce ripe fruit without intermission until late October. The berries were large and beautiful, firm and full flavored to the very last.

✓ **Thompson Red**—The best early red. Hardy, vigorous, productive.

BLACK RASPBERRIES

Black Diamond—Berries large, very sweet and pulpy, yet fine for shipping and evaporating. Canes strong and fruitful. Early.

✓ **Cumberland**—The bush is hardy, a vigorous grower, and exceptionally productive. Fruit of uniform size, and larger than any known black raspberry.



CUTHBERT

✓ **Gregg**—Jet black never falls from the bushes, and of first quality; canes of strong growth, perfectly hardy and immensely productive.

Kansas — Large, round, firm and juicy. Similar to Gregg, but earlier and hardier.

✓ **Ohio** — A strong, very hardy growing sort. A productive market variety, and esteemed for drying.

✓ **Plum Farmer** — One of the very earliest Blacks. High quality, very productive and hardy.

ASPARAGUS

Conover's Colossal—A well-known and popular variety.

Palmetto—A very early variety; even, regular size of excellent quality.

RHUBARB

Every garden should have a few plants of rhubarb. Plant any time, burying the whole plant about three inches in the ground.

Myatt's Linnaeus—Of superior quality; tender, with a mild sub-acid flavor.

CURRENTS

✓ **Cherry (Red)**—Very large; deep red; rather acid; bunches short.

✓ **Fay's Prolific**—(Red) Of large size, fine flavor and twice as prolific as the Cherry.

✓ **Perfection (New)**—Color, bright red. Larger than Fay and Cherry. Very productive. Quality fine. Not so acid as Fay.

✓ **White Grape**—The finest of the white sorts.

✓ **Wilder**—A red currant, productive to the highest degree. Excellent in size and quality.

GOOSEBERRIES

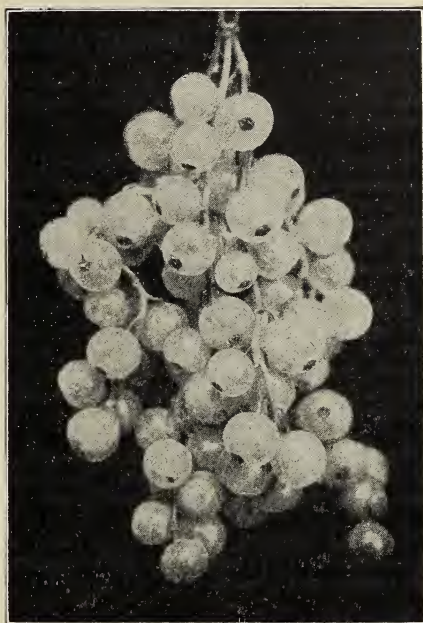
✓ **Downing**—Favorite American variety; pale green and covered with a white bloom; best in flavor and quality; a strong grower, productive and healthy; valuable for market.

✓ **Houghton**—A medium sized American variety, which bears abundant and regular crops, and never mildews; fruit smooth, red; tender and very good; valuable.

✓ **Josselyn**—Good grower, fine foliage and a very profitable fruiter when compared with any other gooseberry in existence.

✓ **Pearl**—The color is light green and quality first class. Being thoroughly tested, we offer it as the best of its class yet grown.

✓ **Smith's Improved (American)**—Color yellow, large, excellent quality, pulp sweet and good.



WHITE GRAPE CURRANT



PORTAGE GOOSEBERRY

MULBERRIES

Downing's—The beauty of this as a lawn or street tree is quite enough to commend it, but in addition it yields an abundant supply of its large refreshing berries for about three months.

Russian—A hardy, rapid-growing tree. Fruit of little value.

NUT TREES

Chestnut, Spanish—A handsome, round-headed tree, producing large nuts in large quantities.

Filbert—A profitable and satisfactory nut to grow. The nuts are rich and of excellent flavor.

Walnut, Black—One of our most valuable nut trees, the timber being highly prized for many purposes, while the nut meats are sought after for the peculiar richness and flavor which characterizes this variety. The Black Walnut has considerable importance as a shade tree.

Walnut, Common English—These trees should be more generally planted in the Eastern states. They make attractive, thrifty trees and produce nuts of great value.

STRAWBERRY PLANTS

PERFECT AND IMPERFECT FLOWERS

Bederwood (Per.)—Berries large, of regular, roundish form, light scarlet, excellent quality, remaining in fruit a long time.

Bubach (Imp.)—P. A. sterling old sort that combines many excellent qualities; great and uniform size, rich color and quality, extraordinary vigor and fruitfulness, fine foliage that endures the hottest suns. Season early to medium.

Brandywine (Per.)—One of the very reliable fruiting sorts that can be depended on for heavy crops on a variety of soils. Berries very large, broadly heart-shaped, bright red to the center; firm-fleshed and finely flavored. A valuable late berry.

Chesapeake (Per.)—Berries very large, regular in shape, glossy and attractive. One of the best market sorts because of its good looks.

Crescent Seedling (Per.)—Good size, a strong grower, very productive; one of the best for market and garden.

Clyde (Per.)—One of the very best medium early varieties, a week earlier than Bubach, and very firm; large, bright scarlet berries of fine flavor. Plants stand drought well, free from rust and disease.

Gandy (Per.)—The popular, late market berry always commanding fancy prices.

Glen Mary (Per.)—A fine, large, late berry of excellent quality.

Marshall (Per.)—Berries are beautiful and average very large. The color is a rich glossy crimson that everyone admires—the surface color running well into the flesh, and the quality is far above the average.

Michel's Early (Per.)—The first variety to ripen here; berry medium to large, roundish, bright crimson, firm, fair quality; plant a strong grower and a good bearer. A fine sort to pollinize early pistillates.

Sample (Imp.)—In productiveness it is perhaps surpassed by none. The fruit is very large. Of fine quality but not the best.

Sharpless (Per.)—One of the best strawberries in cultivation. Possesses ALL the good qualities looked for in a strawberry. A strong grower, productive and largest size.

Senator Dunlap (Per.)—Very productive. Large, bright, or slightly dark red. Quality the very best.

Steven's Late Champion (Per.)—Large, light red berries, pointed globular; regular and perfect in form; very firm and of extra high quality. An ideal plant to produce large berries and yield an enormous quantity of them. Season late.

Warfield (Imp.)—Similar to Dunlap, and a good variety to grow with it. Very hardy and succeeds everywhere. Productive and a good shipper.

Wm. Belt (Per.)—Very large conical; color bright red; quality very good. Season medium to late.



BUBACH

EVERBEARING VARIETIES

Superb—These plants are very vigorous growers and produce wonderful crops when the runners are restricted; but if the runners are allowed to grow, the crop on most of the plants will be light. The young runners do not bear the first year, but bear a good crop the second year, both spring and fall. In the spring it is more productive than most summer bearing kinds, while the fall crop is more beautiful even than the summer crop.

Progressive—This does best on soils that dry quickly after rain. The berries are medium size about like Dunlap. The flavor varies depending on the soil and amount of sun shine, but by most people is classed as very good. It succeeds as a fall producer, with more people than other tested varieties. The summer crop ripens the earliest of any strawberry.

Ornamental Trees

FOR SHADE AND ORNAMENTAL PURPOSES

Deciduous Trees

Deciduous trees are those which periodically lose their foliage. Our purpose is to offer here such trees as have particular value for lawn, avenue or park planting. From our list may be selected trees noted for symmetrical shape, irregular shape, compact head, open head, majestic size, dwarf size, beautiful bloom, and for rich color of foliage. Nature has provided a tree for nearly every purpose and place. Our patrons should observe that many of the ornamental trees are not beautiful or graceful at the age at which they are sold and planted. This is beyond the control of the nurseryman. Trees planted and given time to develop will give satisfactory results.

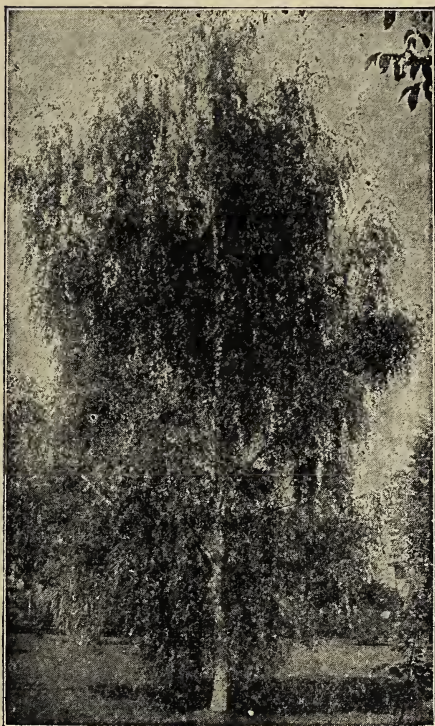
ALMOND (*Prunus Sinensis*)

Dwarf Double Rose Flowering (*A. Japonica* fl. rubra pl.)—A small shrub, producing in May, before the leaves appear, small, double rose-like flowers, closely set on the branches.

Dwarf Double White (*A. Japonica* fl. alba pl.)—Produces beautiful white flowers in May.

ARALIA (*Angelica Tree* or *Hercules Club*)

Spinosa—A native plant valuable for producing tropical effects, having prickly stems, pinnate leaves and bearing immense panicles of white flowers in August.



WEeping CUT-LEAF BIRCH



AMERICAN WHITE ASH

ASH (*Fraxinus*)

European Flowering (*F. Ornus*)—Flowers greenish white, fringe-like, appearing only on the ends of the branches. Blooms early in June.

White (*Alba*)—The native ash.

BEECH (*Fagus*)

American (*F. Ferruginea*)—A well-known native sort.

Purple-Leaved (*F. purpurea*)—Dark purplish foliage, making a striking contrast with the green of other trees.

Rivers—Crimson foliage early in the spring, changing to a dark purple in summer. The finest of all purple-leaved trees.

BIRCH (Betula)

Graceful and suitable for any lawn. Hardy and thrifty in all soils.

Canoe or Paper Birch (B. Papyracea)—This magnificent tree has gathered about it more poetic associations than any other native tree.

Common White (B. Alba)—A well-known variety, making a vigorous, erect growth, and having long, slender branches. Very desirable.

Cut-leaved Weeping (B. Pendula laciniata)—This tree is indeed a picture of delicacy and grace. Makes a large tree.

Young's Weeping (B. Pendula Youngii)—The fine thread-like shoots droop to the ground forming a picturesque tree.

CATALPA

C. Bungei—A small species 8 to 10 feet high, clothed with a dense mass of large, heart-shaped leaves.

C. Speciosa—This is a tropical looking tree, and flowers in July, when few trees are in bloom. A very attractive lawn tree.

**CATALPA BUNGEI****BECHTEL'S FLOWERING CRAB****CHERRY (Cerasus)**

A handsome ornamental tree, especially adapted for small grounds.

Chinese Double Flowering (Sinensis Flore Plena)—A valuable variety, with large double white flowers.

CRAB (Pyrus)

Bechtel's Double Flowering Crab—A medium-sized, ornamental tree of great beauty. When in bloom this tree presents the appearance of being covered with pink roses. Flowers large, fragrant and beautiful.

Floribunda—Flowers crimson, produced in great profusion. A charming variety.

DOGWOOD (Cornus)

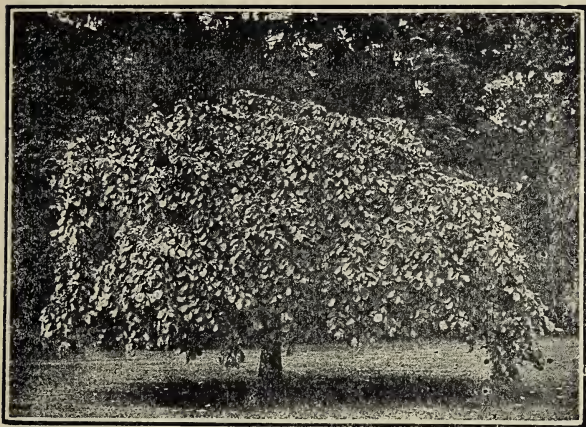
White Flowering (Florida)—Foliage of a grayish green color; turning in the autumn to a deep red. The flowers appear before the leaves in the spring and are about three inches in diameter; white and very showy.

Red Flowering (Flora Rubra)—A valuable variety, producing beautiful carmine flowers.

ELM (Ulmus)

American White (Americana)—A native tree of large size, with open, spreading head and graceful drooping branches.

Camperdown Weeping (U. Camperdown pendula)—One of the most satisfactory weeping trees in cultivation. The growth is rapid, the foliage luxuriant; it forms a fine-shaped head, and is very hardy.



CAMPERDOWN ELM

English (*Campestris*)—A native of Europe, forming a tall, erect tree, with slender branches and small leaves.

HORSE CHESTNUT (*Aesculus*)

European or White Flowering (*Ae. hippocastanum*)—A beautiful well known tree, forming a round compact head, with dark green foliage and an abundance of showy flowers in spring.

Red Flowering (*Rubicunda*)—A splendid tree producing showy red flowers a little later in the season than the white.

Glabra (*Ohio Buckeye*)—A native of the Western States; leaves smooth; flowers yellow; blooms before the others. 6 to 8 feet.

JUDAS TREE (*Cercis*)

American (*C. Canadensis*)—A very ornamental tree with heart-shaped leaves. Before the foliage appears, it is covered with a profusion of delicate pink flowers, from which it derives its name, Red Bud.

KOELREUTERIA

Paniculata—A large shrub or small tree, with foliage somewhat resembling that of the Sumach, and producing large panicles of showy flowers in July. Foliage very brilliant in Autumn.

LABURNUM (*Cytisus*)

Golden Chain—Bears long, pendant racemes of golden flowers in June. Very showy and beautiful.

LARCH (*Larix*)

European (*Europæa*)—A beautiful, rapid-growing tree of irregular, pyramidal form, with small, drooping branches.

LINDEN OR LIME (*Tilia*)
American, or Basswood (*Americana*)—A rapid-growing, open-head or spreading tree, with large leaves. Very desirable.

European (*Europæa*)—A very fine pyramidal tree, smaller in all its parts than the preceding.

White-Leaved European (*Alba*)—A vigorous growing tree, with large handsome foliage, quite downy and whitish underneath; smooth above.

MAGNOLIA

Cucumber Tree (*Acuminata*)—A magnificent tree, producing in June yellow flowers, tinted with bluish purple.

MAIDEN HAIR TREE OR GINGKO (*Salisburia*)

Adiantifolia—A rare beautiful tree from Japan, with remarkable fern-like foliage; distinct and fine.



EUROPEAN LINDEN

MAPLE (Acer)

Ash-Leaved (Negundo)—A rapid-growing tree, with leaves and branches of a light green.

Norway (Platanoides)—Very popular on account of its clean, broad foliage of rich, deep green. Stout, vigorous grower.

Schwedler's Norway (Schwedlerii)—Young shoots and leaves of a purplish crimson color.

Silver-Leaved, or White (Dasycarpum)—A hardy, rapid-growing native variety of the largest size; foliage bright green above and silvery underneath. Valuable for producing a quick shade.

Sugar or Rock (Succarinum)—A well-known native tree. Desirable as an ornamental shade tree.

Wier's Cut-Leaved (Wierri Laciniatum)—Grows very rapidly, and the shoots are so slender and drooping that it has a decidedly graceful appearance. The leaves are deeply and delicately cut.

MOUNTAIN ASH (Sorbus)

American (S. Americana)—Of coarser growth and foliage than the European, and having larger berries of a lighter color. White blossoms appear in early spring, followed by clusters of scarlet berries.

European (S. Aucuparia)—Of finer growth and form than the American. It blossoms during the early spring, after which the bright scarlet berries are formed in clusters.

Oak-Leaved (S. Quercifolia)—Very showy whether in bloom or berry. It forms a compact, pyramidal head. The leaves are bright green above and downy beneath. The blossom is white, forming in early spring.

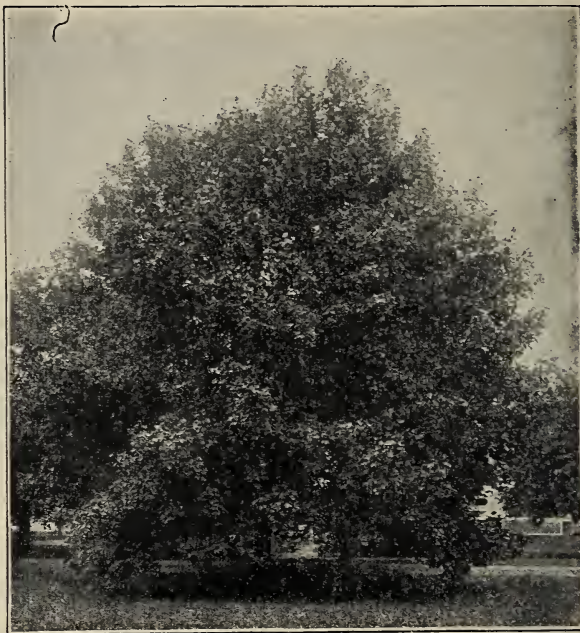
MULBERRY, TEA'S WEEPING

Perfectly hardy, forming a natural umbrella-shaped top or head; foliage handsome; a fine ornamental for the lawn.

OAK (Quercus)

American White (Alba)—One of the finest American trees, of large size and spreading branches.

Rubra (Red Oak)—A broad tree of rapid growth; large, rich foliage, which turns to a bronzy red in the fall. Deservedly popular.

**NORWAY MAPLE**

Scarlet Oak (Coccinea)—A native tree, of rapid growth; pyramidal outline, and especially remarkable in Autumn, when the foliage changes to a bright scarlet.

Pin Oak—A tall, upright growing variety when young, but with age the branches droop. Foliage bright and glossy. One of the best oaks for street planting, and becoming very popular.

POPLAR (Populus)

Desirable where rapid growth is wanted.

Bolleana—A very compact upright grower, resembling the Lombardy Poplar; leaves glossy green above and silvery beneath. The bark of this variety is of a rich green color, giving a distinct and striking appearance.

Carolina—Pyramidal in form and robust in growth. Leaves large, serrated and pale to deep green in color.

Lombardy (Fastigiata)—Well known for its erect, rapid growth and commanding form.

PEACH (Persica)

Double Rose-Flowering (P. Flore rosea pleno)—Flowers double, pale rose colored, like small roses. Blooms in May.

Double White-Flowering (P. Flore alba pleno)—Exceedingly ornamental. Flowers double and pure white. Blooms in May.

PLANE TREE or SYCAMORE (Plantanus)

Silver-Leaved, or White (Alba)—Leaves large, green above and pure white underneath. Rapid growth; wide-spreading habit.

Oriental Plane—A lofty, wide-spreading tree; heart-shaped leaves. Entirely free from worms or insects. One of the oldest cultivated trees known.

PLUM (Prunus)

Prunus Pissardii (Purple-leaved)—A perfectly hardy, small-sized tree or shrub, of elegant appearance. The bark is black, and the leaves a rich purple, gorgeous to behold, retaining their bright color through the entire season. The ends of the growing shoots are brilliant red.

P. Triloba (Double flowering)—A very pretty little shrub, hardy and desirable. The flowers about an inch in diameter, semi-double, of a delicate pink color, appearing in May.

THORN (Crataegus)

Dense, low-growing trees, and very ornamental when in bloom.

Double White (Alba Pleno)—Flowers small, clear white and desirable.

Paul's New Double (Coccinea Flore Pleno Paulii)—Producing bright crimson and very double flowers. One of the best.



CAROLINA POPLAR

TULIP TREE, or WHITE WOOD

(*Liriodendron*)

Tulifera—One of our largest native trees, with large, glossy leaves, shaped like a violin. Very desirable.

YELLOW WOOD (*Virgilia Intea*)

One of the finest native trees. Flowers very fragrant, pure white, and produced in long, drooping racemes in June.

WILLOW (*Salix*)

American (S. Americana pendula)—A variety with delicate leaves and slender branches. Graceful and ornamental. Never grows large.

Babylonica—Our common and well-known weeping willow.

Kilmarnock (S. Caprea pendula)—The best known of the finer weeping ornamental trees. Its great hardiness, vigorous growth, adaptability to all soils, easy culture, fine form, and unique appearance render it a general favorite.

Thurloow Weeping—Of stately proportions with graceful drooping branches and bright, long glossy leaves. The hardiest and best of the willows.



TEA'S WEEPING MULBERRY

Evergreen Trees

The Evergreens are among the most valuable of our ornamental trees. Their greatest importance is perhaps due to the shades of green they afford during the bleak winter months, when the deciduous trees are leafless. They are also very valuable as hedge windbreaks and as screens for hiding undesirable views for or securing privacy.



The NORWAY SPRUCE Hedge is Attractive and Effective

ARBOR VITAE (Thuja)

American (T. Occidentalis)—One of the fine hedge evergreens. Very hardy and easily transplanted. Grows rapidly and stands shearing well.

— var. **T. Aurea**—Golden foliage; fine as an ornamental specimen or in groups.

— var. **T. Compacta**—Dense growth of dwarf habit, deep green and very fine in group plantings.

Globe headed (T. Globosa)—Grows in low, thick, globe form with attractive foliage. Its shape makes it a valuable variety.

Hovey's Golden (T. Hoveyii)—A fine American variety with excellent green foliage, globe form and of dwarf growth.

Pyramidalis—Dark green, compact foliage and remarkable erect form; perfectly hardy.

Siberian (T. Sibericus)—Exceedingly hardy, and keeps its fine color well during the winter. Compact growth, making an excellent tree for lawn specimens. One of the very best for ornamental and hedge uses.

Tom Thumb (T. Ellwangeriana)—A dwarf variety of very compact growth, valuable for small enclosures and low growing hedges.

Vervaeene's (T. Vervaeeneana)—Dense growing foliage which is variegated with yellow, giving the tree a light golden tinge. Much used for hedges near dusty roads.

CYPRESS, JAPAN (Retinospora)

Filifera—This has slender, string-like, drooping shoots. Quite distinct from any other. It makes a unique specimen evergreen.

Filifera Aurea—A golden form of the preceding.

Obtusa—A charming lawn tree of vigorous growth, assuming a pyramidal outline, yet with a pleasing, open habit and graceful, waving branches.

Obtusa Nana—One of the best and hardiest. Intensely dark, shell-like leaves; very unusual. A most elegant evergreen shrub.

Plumosa—More compact growing than Filifera, and makes a nice ornamental tree.

Plumosa Aurea—One of the best known and most valued of all, because of its golden color. It makes a compact growth of much beauty.

Pisifera—Beautiful tree, with delicate branches and fine, feathery foliage.

Pisifera Aurea—A fine pyramidal, bright golden form; popular and graceful.

Squarrosa—This valued sort has steel-colored foliage and makes a tufty, compact growth. It grows to a large size, but by pruning can be kept down to almost any size, as, in fact, can all Retinisporas.

Nordmann's Silver Fir (*A. Nordmanniana*)—Of symmetrical form, vigorous and quite hardy. Its foliage is massive, dark green, shining above and slightly glaucous below, rendering it a very handsome tree throughout the year.

P. concolor (Silver Fir of Colorado)—The finest of the Rocky Mountain evergreens. Tree of graceful habit; broad, handsome foliage, bluish above, silvery beneath. Very distinct and rare.

JUNIPER (*Juniperus*)

Hibernica (Irish Juniper)—Tree with dense pillar-like growth. Glaucous green foliage, with tips of branchlets erect.

Sabina (Savin)—A low, spreading tree with handsome, dark green foliage; very hardy, and suitable for lawns and cemeteries.

Virginiana (Red or Virginia Cedar)—A native form, very common in New England. Tapering, bright, rich green foliage. Bark on trunk and branches reddish brown. Thrives on dry soil.

PINE (*Pinus*)

Austrian or Black P. (*Austriaca*)—A robust growing sort. Leaves long, stiff, dark green. Makes a large spreading tree.

Mugho (Dwarf Mugho)—An upright, small, beautiful pine bush.

Scotch (*P. sylvestris*)—A fine robust, rapid growing tree with stout, erect shoots and silvery green foliage.

SPRUCE (*Picea*)

Colorado Blue Spruce—A beautiful variety, the nearest blue of any evergreen; very distinct in foliage and growth; fine, compact, habit. Foliage rich blue or sage color.

Douglas Spruce (*A. Douglasii*)—From Colorado. Large conical form; spreading branches; horizontal; leaves light green above glaucous below.

Hemlock (*A. Canadensis*)—Delicate, dark colored foliage, and drooping branches. Good for lawn, and also makes a good hedge.

Koster's Blue—A selected strain from the bluest tints of the Colorado Blue. This tree is propagated by grafting to preserve the true type, making it

much more expensive than seedling trees. One of the most attractive conifers ever introduced. It holds its deep color throughout the year.

Norway (*A. excelsa*)—Of large and lofty appearance. Well adapted for large enclosures, and stands pruning well. It is exceedingly picturesque and beautiful; very popular and deservedly so. Includes weeping varieties.

American White (*A. alba*)—A tall tree, loose, spreading branches, and foliage silvery gray. Very bushy and valuable.

TAXUS (Yew)

Cuspidata (Japan Yew)—A rare and beautiful low-growing evergreen. It is hardy as an oak and remains a deep green through the winter, even when exposed to sun and wind.



RETINISPORA OBTUSA



Hardy Deciduous Shrubs

Ornamental and Flowering

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AZALEA

Amoena—This little gem is practically ever green. In late Spring the plants are literally smothered with masses of rosy-crimson flowers. Bushy plants, 12 to 15 inches high.



ALTHEA, DOUBLE PINK

ALTHEA OR ROSE OF SHARON (Hibiscus)

The altheas are free growers, and not particular as to soil. They bloom in August and September, when but few other sorts are in blossom. They attain a height of from six to ten feet.

Double Purple (*H. Purpurea* fl. pl.).

Double Red (*H. Rubra* fl. pl.).

Double Pink.

Double White (*Alba*)—Very large and double, with reddish-purple center.

Variegated Leaved; Double Purple Flowered (*Flore Pleno* fol. var.)—A conspicuous variety with leaves distinctly marked with light yellow, and having double purple flowers; showy and desirable.

BARBERRY (Berberis)

Thunberg's (*Berberis Thunbergi*)—A low, dense, neat little shrub, with a profusion of white flowers in May. These are followed by a heavy crop of rich red berries that cling through the winter. In autumn when both leaves and berries are bright red it is very showy. Valuable for ornamental hedges, masses, borders, etc.

BOX (Buxus)

The different species vary in size from low bushes to medium-sized trees. All are long-lived, of dense, compact growth, and have dark green, glossy leaves. They are used for grouping, edging walks, planting against house foundations for hedges, and in tubs, for formal gardens, terraces and porches. Will grow in sun or shade, but we have found it advisable to use some protection during very severe winters.

CALYCANTHUS FLORIDUS

(Or Sweet Scented Shrubs)

Blooms in June and at intervals through the summer. Flowers of a rare chocolate color; rich foliage. The wood and blossoms have a peculiarly agreeable flavor.

CLETHRA ALNIFOLIA

Sweet Pepper Bush—A pretty little shrub that blooms freely for several weeks in summer; very fragrant white flowers.

DEUTZIA

The Deutzias are of Japanese origin, extremely hardy, luxuriant foliage, very attractive flowers, and fine habit.

Crenata—Double white flowers tinged with rose. Blooms the middle of June. 5 feet.

Gracilis—A graceful and charming shrub, with pure white flowers. Blooms the middle of June.

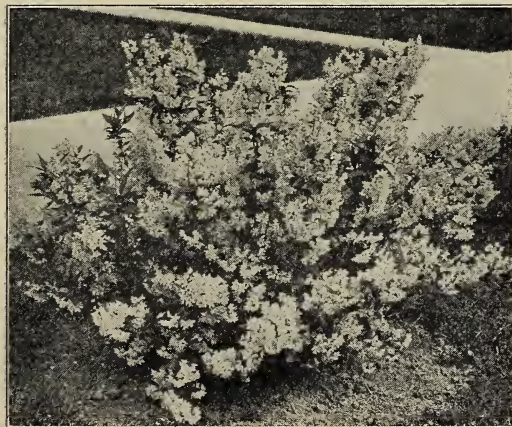
Lemoinei—Flowers pure white, borne on stout branches of upright growth. Dwarf and free flowering.

Pride of Rochester—One of the finest varieties, large double white flowers. It excels the older sorts in size of flowers, profuseness of bloom and vigorous habit. Blooms early in June.

DOGWOOD (Cornel or Cornus)

C. alba—Very conspicuous and ornamental in winter when the bark is blood red.

var. Elegantissima Variegata—One of the finest variegated shrubs; of rapid growth. The leaves are broadly margined with white, while some are entirely white.

**DEUTZIA GRACILIS****DEUTZIA**

var. Sibirica (Red Siberian)—During the winter the bark is of a bright red color. The foliage is beautifully silvery margined.

C. Mascula (Cornelian Cherry)—A small tree, native of Europe, producing clusters of bright yellow flowers early in spring, before the leaves, followed by red berries.

var. variegata (Variegated Cornus)—The flowers are bright yellow and are borne in clusters in early spring, before the leaves appear. The foliage is beautifully variegated with white. Makes a small shrub.

ELDER (Sambucus)

Hardy, easily grown shrubs.

S. Canadensis (Common Elder)—Broad panicles of white flowers in June; reddish purple berries in autumn.

var. aurea (Golden Elder)—A handsome variety, with golden yellow foliage. A valuable plant for shrubberies.

var. laciniata (Cut-leaved Elder)—One of the best cut-leaved shrubs.

ELEAGNUS (Oleaster)

E. argentea (Silver-leaved)—A native species of erect growth and silvery foliage. Flowers small, yellow. July and August.

E. longipes (Japan Oleaster)—In July the plant is covered with red berries. The bush is highly ornamental, the leaves remaining fresh till late in autumn.

EXOCHORDA

E. Grandiflora (Pearl Bush)—From North China. A compact, hardy bush 10 to 12 feet high; can be trimmed into any desired shape. The flowers are borne in May in slender racemes of eight to ten florets each.

FORSYTHIA

F. Fortuneii—Growth upright, foliage deep green, flowers bright yellow. Early flowering shrub. Very hardy.

F. Viridissimi—An elegant, hardy shrub. Bark and foliage a dark green color. Beautiful yellow flowers. Blooms in May before the leaves appear.

Intermedia—This also is an erect-growing shrub, but when full grown the branches become arching and it resembles *Suspensa*; very floriferous.

Suspensa—In this variety we have the weeping form with long, pendulous branches; golden-yellow flowers early in April.



GOLDEN ELDER

FRINGE (*Chionanthus*)

Purple Fringe, or Smoke Tree (*Rhus Cotinus*)—A small tree or shrub, very much admired on account of its peculiar fringe or hair-like flowers, covering the whole surface of the bush in mid-summer.

White (*C. Virginica*)—A superb shrub. 10 to 20 feet. Has a compact, roundish form, large, glossy leaves, and drooping racemes of pure white flowers. Blossoms in May and June.

HALESIA (Silver Bell)

Tetraptera—A small native tree, bearing most beautiful bellshaped flowers. similar to the Snowdrop but much larger. Blooms in May.

HONEYSUCKLE

Fragrant Upright—desirable variety, with dark almost evergreen foliage. Small, very fragrant flowers. Blooms in May. A valuable shrub.



BLOOM OF FORSYTHIA

Morrowi—One of the handsomest of the bush honeysuckles. Wide spreading branches, bush 6 feet. Flowers followed by bright red fruit in August, persisting until late in fall.

Red Tartarian (*L. Tartarica rubra*)—Blooms in May. Bright pink flowers.

White Tartarian (*L. Tartarica alba*)—Blooms in May. Flowers a dull white color.

HYPERICUM (St. John's Wort)

Hypericum (*Aureum*)—A dense, globular shrub with oval, glossy, foliage and myriads of bright golden-yellow flowers, borne for a period of several weeks.



PURPLE FRINGE

HYDRANGEA

Arborescens grandiflora (Hills of Snow)—The blooms are large, snow white and foliage finely finished. Hardy. Season from June through August. Best Hydrangea

Paniculata Grandiflora—Hardy; thrives in all soils; grows rapidly and blossoms profusely. The flowers are pure white, afterwards changing to pink.

ILEX (Holly)

Verticillata (Black Alder, or Winterberry)—Of close, upright growth, with oval foliage; thickly studded in autumn and throughout the winter with masses of most brilliant scarlet berries.

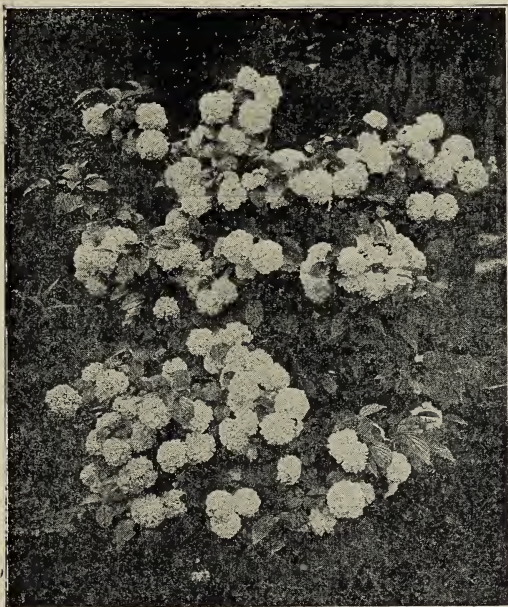
JAPAN QUINCE (*Pyrus Japonica*)

C. Japonica—Very ornamental in early spring, as its bright scarlet flowers completely cover the branches before the leaves are formed. Makes a good hedge.

KERRIA (Corchorus. Globe Flower)

Japonica—A beautiful shrub of graceful open habit, with slender green branches clothed with pointed soft green foliage and thickly studded with single, deep golden-yellow flowers in early summer and also borne at intervals in smaller quantities throughout the summer.

Flore Pleno—Double flowering kerria. A medium sized shrub, with double yellow flowers. July to October.



JAPAN SNOWBALL



LILAC

LILAC (*Syringa*)

Charles X—Deep purplish lilac flowers in large trusses.

Frau Bertha Dammann—This produces the largest clusters of white lilacs of the common species known in cultivation, and also the purest white.

Japonica—A species from Japan, becoming a good sized tree. Foliage dark green, glossy, leathery; flowers creamy white, odorless, in great panicles. A month later than other Lilacs.

Ludwig Spaeth—Deep purplish red flowers in dense, large panicles. Best of its color.

Madame Abel Chatenay—Large panicles; double white, very fine.

Marie Legraye—Large panicles of white flowers. Valuable for forcing. The finest white Lilac.

Madame Lemoine—Superb double white.

President Grevy—Elegant, large, dense trusses of double, deep blue flowers. One of the finest new double sorts.

Persica (Persian Lilac)—Small foliage and bright purple flowers.

Alba (White Persian Lilac)—Delicate white fragrant flowers, shaded with purple. A superb variety.

Vulgaris (Common Lilac)—Bluish purple flowers. A standard variety.

Alba (Common White Lilac)—Cream colored flowers.

PRIVET (*Ligustrum*)

Chinese Privet (*L. Ibotia*)—A valuable shrub, native of China and Japan. Flowers, large, white, very fragrant, produced in great profusion; leaves long and shining; one of the hardiest of the Privets and distinct.

California (*L. ovalifolium*)—Of great value as a hedge, and of such positive beauty as to be attractive when grouped with other shrubs. When planted singly it forms a very compact, dense, upright shrub, of medium size. The leaves are so glossy as to have the appearance of having been freshly varnished. The foliage hangs on until late in the winter, making it nearly evergreen.

***Ligustrum Amurense* (Amoor Privet)**—(B) A large shrub with upright branches. Leaves dark green and lustrous, tardily deciduous, or in the South nearly evergreen. Flowers white, in erect panicles. Splendid for hedges. Very similar to the California Privet, so universally used for hedging in the east, but unlike it here in that Amur is hardy.

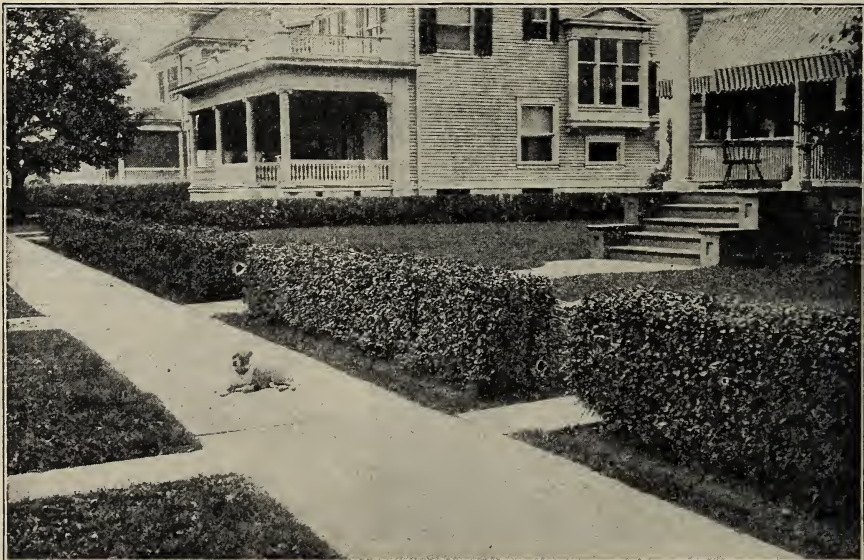
RHODOTYPUS (White Keria)

Kerroides—A choice and rare Japanese shrub. It is a slender-branched bush, with very pretty, deeply veined leaves, and pure white flowers, borne at intervals all summer.

**HIGH BUSH CRANBERRY****SNOWBALL (*Viburnum*)**

Common (Sterilis)—The well-known sort, and a general favorite on account of its large clusters of white flowers in June.

High, or Bush Cranberry (*Opulus*)—Red berries resembling cranberries.

**HEDGES OF CALIFORNIA PRIVET**

Dentatum (Arrow-Wood)—Glossy, handsome leaves, white flowers, and fine, steel-blue berries in fall.

Japan (*Plicatum*)—A beautiful species from Japan, surpassing the Common Snowball in many respects, as its habit is much better; foliage handsomer, flowers whiter and more delicate.

Tomentosum (Single Japan Snowball)—Foliage resembles the Japan Snowball; flowers white, in flat racemes and in great profusion.

SPIREA

Anthony Waterer—A new dwarf compact-growing shrub. Blossoms in broad flat heads of beautiful deep red color. A perpetual bloomer.

Arguta—One of the finest of early spring blooming shrubs of light open habit of growth, with small deep green foliage of minute purest white flowers.

Aurea—The leaves are bordered with golden yellow, particularly in June, when the branches are covered with small double white flowers.

Billardii—Blossoms nearly all summer; rose colored; fine; showy.

Callosa Rubra—Desirable because it blooms nearly all summer. The flowers are rose colored, borne in panicles. A very fine grower.

Douglas (*S. Douglassii*)—Spikes of rose colored flowers in July and August.

Golden-Leaved (*opulifolia aurea*)—Variety with golden yellow foliage, and tinted flowers in June. Strong grower.

Prunifolia (Bridal Wreath)—Beautiful white flowers double and very profuse. Blooms in May. Foliage, scarlet in autumn.

Reevesii—Narrow, pointed leaves. The flowers are white, quite large, and borne in clusters, entirely covering the whole plant. Blooms in June.

STEPHANANDRA

Flexuosa—A handsome, graceful shrub with spreading, drooping branches and elegant foliage. Bears pure white flowers in June. In Autumn the foliage takes on handsome purplish coloring.

STRAWBERRY OR SPINDLE TREE (*Euonymus*)

A showy shrub. Its chief beauty consists in its red berries, hanging in graceful clusters from the end of the branches until midwinter.

SYRINGA OR MOCK ORANGE (*Philadelphus*)

Garland (*Ph. Coronarius*)—A well known hardy shrub. White, fragrant flowers. Blooms in June. Makes a large shrub.

Golden-Leaved (*Ph. Foliis aureis*)—A small shrub of striking beauty. The foliage is golden yellow, and retains its lovely color through the entire season. White flowers. Blooms in June. Very hardy.

Large-Flowered (*Grandiflorus*)—A desirable sort.



SPIRAE VANHOUTTE

Thunbergs' (*Thunbergii*) — A Japanese species of small size, with narrow linear leaves and small white flowers; one of the best.

Van Houttei—The finest of all *Spiræas*, a most charming and beautiful shrub; having pure white flowers in clusters. Extraordinarily profuse in bloom, and the plant is a vigorous grower and very hardy.

SUMAC (*Rhus*)

Copallina (Shining Sumach)—Foliage a lustrous green in Summer, changing to a rich crimson in the Autumn. Greenish yellow flowers in August.

Fern-Leaved (*Laciniata*)—A hardy plant with beautiful fern like leaves, milky white on under side, changing to a brilliant scarlet in autumn.

Staghorn (*R. typhina*)—A large shrub or tree, brilliant foliage and scarlet fruit in autumn.

SYMPHORICARPUS

St. Peter's Wort or Waxberry)

Racemosus (Snowberry)—A well known shrub with small, pink flowers and large, white berries that hang on the plant through part of the winter.

Vulgaris—Red fruited or Indian currant. A shrub of very pretty habit. Foliage, flowers and fruit small; fruit purple and hangs all winter.

TAMARIX

Of great value for planting by the seaside

African (*Africana*)—Thrives in any soil. The foliage is handsome. The flowers are small, borne in spikes in May. Its habits are upright.

Chinensis—A vigorous upright grower, delicate light green foliage, flowers rose colored, in September.

WEIGELLIA (*Diervilla*)

Of Japanese origin, producing in June and July superb large trumpet shaped flowers, of various colors.

Candida (white)—It is of vigorous habit, an erect grower becoming in time a large-sized shrub; flowers pure white and produced in great profusion in June; plants continue to bloom during summer.

Rosea—The best known sort. From China. Rose colored, trumpet-shaped flowers. Blooms in June. 4 to 6 feet.

Variegated-Leaved (*Foliis variegatis*)—Leaves bordered with yellowish white, making the bush very conspicuous the entire season. Pink flowers blooming in June.

Eva Rathka—Vigorous growing, and erect in form. The bright carmine flowers are the best of the red flowering kinds.

Floribunda—Of erect habit. Dark reddish purple bloom. A compact slender grower.

Climbing and Trailing Vines

Ornamentals of this class are so hardy, so easily grown, and so beautiful, that they deserve great attention.

AKEBIA

Canadensis Quinata—A singular Japanese climbing shrub, with fine foliage, purple flowers and ornamental fruit.

ARISTOLOCHIA

(Dutchman's Pipe)

Sipho—A rapid growing vine with magnificent foliage, ten to twelve inches in diameter, and curious pipe-shaped, yellowish-brown flowers.

BIGNONIA (Trumpet Flower)

Radicans—A vigorous and hardy climber, with clusters of scarlet, trumpet-shaped flowers in August.

Grandiflora (New)—Leaves thick and shining, and immense blossoms of gorgeous crimson and yellow

CELASTRUS

Scandens (Bitter Sweet)—One of our native climbing plants of rapid growth, with attractive light green foliage and yellow flowers during June, which are followed in the Autumn with bright orange fruit.



ARISTOLOCHIA

CINNAMON VINE

(*Dioscorea*)

D. divaricata (Chinese Potato or Yam)—Very tall climber, roots very deep. A tropical plant but hardy here.

CLEMATIS

The finer varieties of clematis are today the most showy and effective of all the hardy flowering climbing vines known, so far as richness of color and elegance of form of the flower is concerned. They are peculiarly adapted for covering pillars, trellises, walls, fences rocks, etc., their exceedingly rapid growth rendering them especially valuable for hiding from view any unsightly object. They are equally efficient when used as a bedding plant, covering a bed very quickly if pegged down occasionally.

C. coccinea—A bell shaped heavy petaled flower, borne in profusion for a long season, color bright scarlet.

C. Duchess of Edinburgh—The best of the double pure whites. Deliciously scented.



CLEMATIS JACKMANNI



CLEMATIS PANICULATA

C. Crispa—Flowers blue, with center of petals an opaque white; fragrant.

C. Henryii—Fine bloomer; flowers large, of a beautiful creamy white, consisting generally of from six to eight sepals. June to October.

C. Jackmannii—One of the most popular varieties. It is a strong grower and produces a mass of intense violet purple flowers from June to October.

C. Madame Eduard Andre—Flowers large, of a beautiful bright velvety red, very free flowering and continuous bloomer.

C. Paniculata—From Japan. A luxuriant grower, profuse bloomer with fine foliage. Flowers of medium size and fragrant, produced in the greatest profusion in late summer.

C. Ramona—A strong, rampant grower, and very hardy. It is a free and perpetual blooming variety; the color of the flower is a deep sky blue, and larger than any variety.

EUONYMOUS

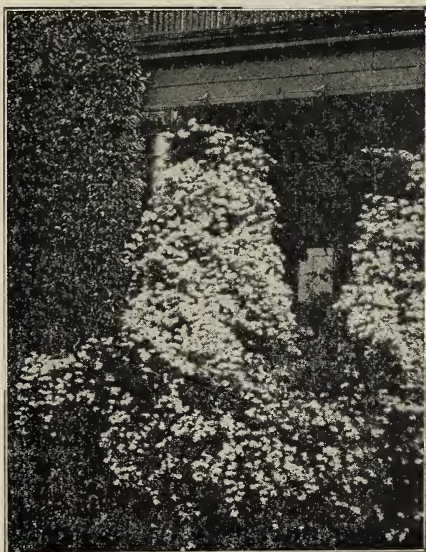
E. Marginata alba (Variegated Leaved Euonymous)—Silver striped and edged with silver; a beautiful evergreen plant; slow grower; valuable for edging borders.

E. Radicans.—Foliage green, edged with silver. More hardy than the preceding.

HONEYSUCKLE (*Lonicera*)

Chinese Twining (*L. Japonica*)—A well-known vine holding its foliage nearly all winter. Blooms in July and September and is very sweet.

Hall's Japan (*Halleana*) — An almost evergreen variety, with pure white flowers, changing to yellow; very fragrant and a vigorous grower. Covered with flowers from July to December.



CLEMATIS AND AMPELOPSIS

CLIMBING VINES—Continued

Monthly Fragrant (Belgica)
Flowers red and pale yellow;
sweet scented; blooms through
the summer.

Scarlet Trumpet Monthly
(*Sempervirens*)—Flowers deep
red, trumpet shaped, flowers all
Summer.

IVY (*Hedera*)

American Ivy, or **Virginia
Creeper** (*A. quinquefolia*)—
Also called Woodbine. A very
rapid grower, having beautiful,
dark green foliage; assumes
rich crimson hues in autumn.

Englemanni—Very similar
to *Quinquefolia*, clings closely
to its support, and is a valua-
ble vine for covering walls and
trellises.

English (*H. Helix*)—A well
known old and popular sort.

Veitchii, or **Boston Ivy**—
Leaves overlapping each other
they form a dense sheet of
green. The plant requires a
little protection the first winter
until it is established, but after that it may be



MATRIMONY VINE

safely left to care for itself. It grows rapidly
and clings to the surface of even a painted brick
wall with great tenacity. The foliage changes
to crimson scarlet in autumn.

MATRIMONY VINE

(*Lycium Sinensis*)

A vigorous climber, covered with bright
purple, star shaped flowers, succeeded by
brilliant scarlet berries. Flowers and fruit
continue forming throughout summer. Of the
easiest culture, thrives everywhere and in any
soil.

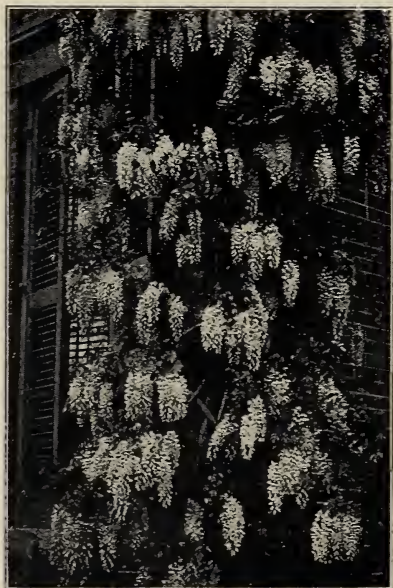
TRUMPET VINE (*Radicans*)

A splendid climber, vigorous and hardy, with
clusters of large, trumpet shaped scarlet
flowers in August.

WISTARIA

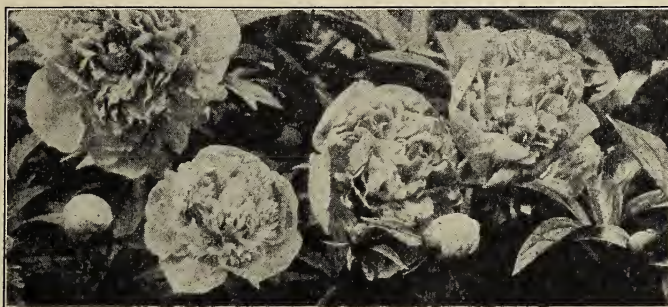
Chinese Purple (*W. sinensis*)—One of the
most elegant of climbing vines and a rapid
grower. Bears long clusters of pale blue flowers
in May and June, and also in September.
Extremely hardy.

Chinese White (*W. var. c. alba*)—Habit of
growth similar to Chinese Purple, but the
flowers are somewhat smaller and pure white.
Blooms in June and September.



CHINESE PURPLE WISTARIA

Hardy Herbaceous Perennials



These are plants which may be left permanently in the open ground. Their foliage dies down each fall, and the roots send out new growth each spring.

With an assortment of these plants, it is very simple and easy to secure a beautiful collection of flowers, varying in color and season of bloom to suit the fancy of the gardener. The Perennials offered here may be planted either fall or spring.

ADAM'S NEEDLE (*Yucca*)

Filamentosa—Of tropical appearance with large sword-like foliage and upright branched spikes of fragrant creamy-white flowers. 4 to 6 feet. June and July.



ADAM'S NEEDLE

ACHILLEA (Yarrow)

Achillea millefolium rubrum—A garden form of the "white Yarrow" so common along the roadsides. Deep rose; flowers freely.

A. Ptarmica plena—"The Pearl." Pure white double, particularly good for cutting.

A. tomentosa—A golden species, very different from all the preceding, growing in tufts and covering the ground with a carpet of green. 2 feet. June to September.

ACONITUM (Monkshood)

Aconitum Napellus—A stately plant so often seen in old fashioned gardens. Large dark purple flowers. September and October.

Aconitum Autumnale—A tall plant. With spikes of showy, blue, helmet shaped flowers. 3 to 4 feet. August, September.

ANEMONE (Wildflower)

The Japanese Anemones are undoubtedly the best of their kind, and well worth special attention. They bloom in late fall when flowers are becoming scarce, and are very fine for cutting.

Anemone Japonica—There are a number of forms and colors of the Japanese anemones all of which are particularly fine. We list the following as being the best of the class.

A. Japonica alba—Large white flowers.

A. Japonica brilliant—Beautiful shade of dark red.

A. Japonica, Queen Charlotte—Beautiful new variety, with large, semi-double flowers of exquisite pink.

ANTHEMIS (Marguerite)

Tinctoria—A profuse bloomer and very showy. Lemon-yellow color. A good border plant. 2 feet. June to September.

Tinctoria Alba—One of the most satisfactory Creamy white flowers. 2 feet. June to October.

Kelwayi—Flowers very deep yellow, fine for cutting. 2 feet. June, October.

AQUILEGIA (Columbine)

The Columbines have an established place in all old fashioned gardens. Their curious forms and many pleasing shades of color, and the readiness with which they adapt themselves to all localities have made them prime favorites.

A. Alpina—In many shades of blue and purple. June.

A. Canadensis—Scarlet. May and June. 1 ft. A pretty flower for rockwork and partially shaded places.

A. Vulgaris—Common garden Columbine, in all shades of blue and purple.

ASTER (Michaelmas Daisy or Starwort)

In the fall of the year, they make a grand sight when planted in masses, and if the right selection be planted, will keep the garden gay from June until frost.

A. Amethystinus—One of the most showy. Large, pale blue flowers. September.

A. Chapmani—White.

A. Incisus—Light blue. July and August.

A. Tataricus—Has a stem 6 to 8 ft. high, with a huge panicle of light purple flowers, in the fall, after almost all other flowers are over.

BUTTERFLY BUSH (Buddleia)

Veitchii—Long graceful stems bearing beautiful lilac colored clusters of miniature flowers. 4 to 5 feet. July to frost.

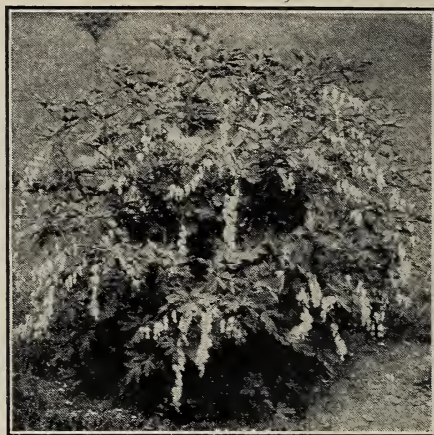


BLOOM OF BUTTERFLY BUSH

CAMPANULA (Bellflower or Bluebells)

C. glomerata—Blossoms borne in clusters on long stems. June. Blue. 1½ ft.

C. medium—The well known Canterbury Bell. Flowers large. Blue and white. 2 ft. June.



BLEEDING HEART

C. persicifolia alba—White flowers of immense size. 2 feet. June, July.

C. rotundifolia (the Scotch Harebell)—A pretty plant, well deserving of its popularity. 1 foot. June, August.

CHRYSANTHEMUMS

Our collection of hardy chrysanthemums is of the finest, the following being a choice selection of the best in size and color.

Autumn Beauty—Golden brown.

Eva—Clear pink.

Favorite—Bright pink.

Gold Queen—Clear yellow.

India—Indian Red.

Klondike—Deep brilliant yellow.

Minta—Light pink.

Queen of Whites—Creamy white.

Rosea—Bright red.

Snowclad—Pure white.

CONVALLARIA (Lily-of-the-Valley)

There is a corner in every garden where a few of these old favorites should be planted. Our stock is well established and will give good satisfaction.

Convallaria majalis—The well known Lily of the Valley.

DAISY SHASTA (Alaska)

A wonderful plant of the Daisy family, producing an abundance of beautiful white flowers. From two to five hundred blossoms in the season is the remarkable record.

DELPHINIUM (Hardy Larkspur)

The following list of Delphiniums comprises the best in general cultivation. They bloom from June to August.

D. Azureum—A beautiful azure blue, varying to white.

DELPHINIUM (Cont.)

Belladonna—Ever blooming; skyblue color; dwarf growing; flowers till frost. 2 feet.

Chinense—Low growing, with gentian-blue flowers.

Formosum—Dark blue with white center; very hardy and free flowering.

Gold Medal—Strong vigorous habit with flowers on spikes two feet long or more. Flowers light shades of blue.

DIANTHUS (Pinks)

D. Barbatus—The well-known Sweet William, in many colors. Blooms continuously all summer, and is one of the easiest to cultivate.

D. Heddegi—Among the most beautiful of the hardy pinks. Flowers of all colors and many peculiar markings.

D. Chinensis—Beautiful single and double flowers of many colors and markings.

DICENTRA (Bleeding Heart)

D. Spectabilis—A pleasing and well-known plant. It can hardly be surpassed for cutting for vases. Pink. Early spring.

DIGITALIS (Foxglove)

The Digitalis likes a little shade or a cool, somewhat moist place, though doing well under generally fair conditions.

D. grandiflora—Yellow flowers; quite rare. June and July.

D. purpurea—Flowers purple and white. May and June.

D. lanata—Small flowers, creamy yellow varying to white and pale lilac; racemes long and dense.

FUNKIA (Day Lily)

The day lilies are very attractive, both in flowers and foliage, and thrive well in damp and partially shaded places, although they will grow in almost any locality.

F. Japonica (subcordata, or alba)—Pale green foliage and large, fragrant, pure white, wax-like flowers. One of the best. September.

F. Lancifolia—Dark, shining green, narrow foliage and blue flowers. August.

GAILLARDIA (Blanket Flower)

No plant in the hardy garden gives more satisfaction than the Gaillardia. It flowers in great profusion nearly all summer long. The long, dry spells affect it very little, and except in very wet places, it will grow anywhere.

Gaillardia arista—Newest hybrids, very large and fine. Crimson, yellow and brown are the prevailing colors. Its value is heightened

by removing the old flower-heads, thereby lengthening the blooming period.

G. Maxima grandiflora—Extremely large flowers of bright golden yellow. In bloom constantly from early summer to frost.

HEMEROCALLIS (Yellow Day Lily)

The Hemerocallis, or bronze and yellow day lilies are among the most popular of hardy plants. All are robust growers and satisfactory in every way.

H. flava—Lemon-yellow. Very fragrant and one of the best. June.

H. fulva—The old-fashioned bronze day lily. August.

HOLLYHOCK (Althea Rosea)

The stately hollyhock is more popular than ever, although it is perhaps one of the oldest of garden plants. The doubles are in six colors, the very best strains of white, red, yellow, maroon, salmon and pink; singles mixed.

IRIS

Beautiful flowering, hardy bulbous plants which bloom early in the spring.

Aurea—Solid, bright yellow; very fine.

Madame Chereau—White, elegantly frilled with violet. One of the best. Very effective for edging.

Pallida Prosperden—Light and deep lilac.

Queen of May—Light lilac, blending to white.

MYOSOTIS (Forget-me-not)

Myosotis palustris—The old fashioned forget-me-not. Dainty blue.



WHITE DAY LILY



IRIS

OENOTHERA (Evening Primrose)

Oenothera Missouriensis (macrocarpa)—Lemon yellow; very large flowers and curious fruit.

M. speciosa—Large white flowers. A grand species of exceptional merit.

M. Youngii—Pale yellow.

PAEONIES (Herbaceous)

It is surprising that so noble a flower, almost rivaling the Rose in brilliancy of color and perfection of bloom, should be so neglected. Amateurs seem to have lost sight of the many improved varieties introduced within the last few years, and our finest gardens, perfect in other respects, are singularly deficient in specimens of the newer kinds. They blossom early in June. Our collection has been made with great care and includes the best and most distinct varieties.

Alba Superba—White, large and full, touched with carmine.

Baron Rothschild—Outside petals rose, salmon center, sweet, distinct.

Caroline Mather—Purple crimson, very large, double and very dark.

Couronne d'Or—Snowy white with crimson blotches in center.

Duchess de Nemours—Pure white Crown, sulphur white collar. Fragrant, early.

Duke of Wellington—White sulphur center.

Edulis Superba—Soft pink, profuse, early.

Elegans—Dark pink, salmon center, loose, fine, very fragrant.

Festiva—White, outside petals shell pink.

Festiva Maxima—Creamy white with small center of carmine; round, early, sweet.

Francois Ortegat—Purplish crimson with brilliant golden yellow antlers.

Humei—Large, full rose color flowers; late, one of the best.

La France—Pink outside petals with yellowish center. Very fine.

La Sublime—Crimson, fragrant, very fine full flowers.

Louis Van Houtte—A fine dark cherry red; very double.

Mme. Crousse—One of the best whites.

Officinalis Rubra—Crimson, large, very early.

Rosea Grandiflora—Rosy crimson, very double, early.

Triumph du Nord—Violet rose, lilac shade.

Queen Victoria (Whitley) —Pure white, one of the best standard varieties for cut flowers.

Victor Lemans—Rosy outside, white center, spotted with carmine.

PAPAVER (Poppy)

Papaver bracteatum—Crimson scarlet, with black spots.

P. nudicaule (Iceland Poppy)—Dwarf form; bright yellow flowers.

P. orientale—Large, bright crimson. June.

PHLOX

It is no exaggeration to say that the perennial phlox are among the best and most popular garden plants. For producing a grand show of color they have no equal; they produce a fine effect when grouped with other plants in the hardy border, furnishing brightness after the shrubs are done blooming.

Another good quality is it begins to blossom in early summer and continues until late in the fall.

Amazon—Large pure white flowers.

Boule de Feu—Brilliant scarlet; dwarf.

Flambeau—Bright orange red, dark center.

Fraulein G. Von Lassburg—Pure white.

Isabey—Beautiful salmon pink.

L'Esperance—Lavender pink, white center.
 Pantheon—Large salmon pink flowers.
 Pecheur d'Island—Pure white, large, early.
 R. P. Struthers—Brilliant red.
 Richard Wallace—White, violet center.
 Sunset—Dark rosy-pink.
 Wm. Robinson—Salmon rose, pink center.

PLATYCODON (Chinese Bellflower)

Handsome flowers, with a flowering season lasting from June to October. The prevailing color is blue, but they often come white or variegated.

Platycodon grandiflorum—The tallest, growing 2 feet high.

P. Japonicum—More bushy, with larger flowers.

RUDBECKIA (Cone-flower)

The Rudbeckias do much to keep the garden bright during the hot days of summer. All are of a rich yellow color, and, with one exception, have cone-shaped, brown centers.

Rudbeckia fulgida hirta and *speciosa* are kinds known as Black-eyed Susans, differing only in habit. They produce sheets of golden bloom in July and August.

R. lanciniata (Golden Glow)—The double, yellow, dahlia-like flowers borne on stems



PLATYCODON

6 to 8 feet high, in great profusion, makes it a very conspicuous object during August.

R. Maxima—Very distinct and striking, having large, glaucous green leaves, and sending up flower-stems 5 feet high, each stem bearing from one to four flowers.

SOLIDAGO (Goldenrod)

Although these are so common, they make very pleasing subjects to plant along shrubbery borders.

Solidago caesia—One of the finest of the goldenrods.

STOKESIA

Stokesia cyanea—A very pleasing flower, very much like the China Aster. Blue. July to September.

TRITOMA (Red-hot-Poker Plant)

Has sword-like leaves and dense spikes of fiery red flowers, borne on a stiff stem, 3 to 4 feet high. Needs protection in winter.

Tritoma uvaria grandiflora—Vermillion-scarlet flowers changing to orange. July and August.

TROLLIUS (Globe Flower)

The Trollius, or Globe flowers, are very attractive, and much resemble large buttercups.

Trollius Europaeus — Yellow. Large. May and June.



PHLOX

Hardy Rose Bushes

Cultural

Roses succeed best in a deep, rich, clay loam soil. In making a rose bed, prepare the soil as follows: If in the lawn, and the ground is sodded over, remove the sod, if the ground is a stiff clay, to the depth of four inches, spade up the ground to the depth of 15 inches thoroughly then prepare a compost as follows: Two parts of leaf mold, one part sandy soil, or leached ashes, one part good, well-rotted cow manure. Mix these thoroughly together and place six inches deep of this mixture on top of the bed. Spade it in thoroughly, mixing into the ground. If the ground is sandy use the same amount of clay loam and cow manure. If it is a clay loam use leaf mold two parts, and cow manure one part, and proceed the same as above; if it is a muck and the ground is well drained, use a liberal amount of well-rotted cow or horse manure. The manure must be well rotted and mixed thoroughly through the soil.

How to Plant—Place new stock in soft water twenty-four hours before setting; prune off all the broken roots. Plant $2\frac{1}{2}$ feet apart. If set in rose beds 2 feet; in hedge, if set two rows side by side, $2\frac{1}{2}$ by $3\frac{1}{4}$ feet. When setting be careful to straighten out the roots and press the dirt well around them with foot or hands. Set them as deep as they grow in the nursery. You can tell by the dark earth-line on the rose stalk.

Budded roses should be set with the bud 4 inches under the ground. After setting, cut the tops off the weak plants 6 inches from the ground, and the strong plants 8 inches, either fall or spring setting. If it is in the spring cover the top of the bed $1\frac{1}{2}$ inches deep with good rotted manure. If it is a fall set, after cutting the tops off, hoe the dirt up around the stalk three or four inches, and before cold weather sets in, or about the time, hoe the dirt around them clear up to the top, and press around the plants, then cover three or four inches deep with good horse manure from the stable, which should have plenty of straw in it; leave this on all winter. When spring comes in March or April, owing to the earliness of the spring, remove all the manure and level up your bed; put two inches of this manure on top of your rose bed, shaking out all the straw; dig this into the ground with manure fork.



ANNE DIESBACH

HYBRID PERPETUAL VARIETIES

Alfred Colomb—Bright carmine red; clear color, large, deeply built form; exceedingly fine.

American Beauty—The flowers are a deep crimson color, of very large size, and the most fragrant of its class. It is a continuous bloomer. Should be protected in winter.

Anne de Diesbach—Brilliant, crimson, sometimes shaded with bright maroon. A superb garden sort; fragrant; one of the hardiest and best.

Baronne de Bonstetten—Rich, dark red, passing to velvety maroon, highly fragrant. Very double.

Baroness Rothschild—Light pink, cupped form, very symmetrical, without fragrance, very beautiful. A moderate grower only.

Coquette des Alpes—Stronger in growth and larger in flower than any of the other Hybrid Noiesttes. The blooms are of medium size, white slightly tinted with rose on the edge of the petals.



FRAU KARL

General Jacqueminot—Brilliant crimson, large and very fine, one of the handsomest and most showy roses of this color. Beautiful in the bud; semi-double when full blown. Of fine growth free; a universal favorite.

Harrison's Yellow (Austrian)—Bright yellow.

Hugh Dickson (New)—Intense brilliant crimson shaded scarlet, with large, smooth petals, slightly cupped. Vigorous growth.

John Hopper—Rose, with rosy crimson center; splendid form. Standard sort.

Jules Margottin—Light, brilliant crimson; large, full and beautiful.

Lady Helen Stewart—Bright crimson scarlet; large, full and of perfect form, produced on long, stiff stems, highly perfumed.



M. P. WILDER

Captain Hayward—Bright crimson carmine, an entirely distinct shade of color. Flowers of perfect form and very sweet.

Clio—The flower is perfection in form, with fine broad petals; color delicate satiny blush, with a light shading of rosy-pink at the center.

Eugenie Verdier—Beautiful silvery pink, tinged with fawn; large, full, finely formed; exquisite buds.

Fisher Holmes—Deep, glowing crimson; large, moderately full, and of fine imbricated form. A superb rose.

Francois Levet—Cherry red; medium size, well-formed; very free bloomer.

Frau Karl Drusckhi—This new hardy Rose is of recent origin, and has won many prizes and made many friends. It is unquestionably the ideal hardy white rose. Its flowers, which are very large, are perfect in form and snow-white in color, with large shell-shaped petals, forming a beautiful flower.



GENERAL JACQUEMINOT

La France—Delicate silvery rose; very large and full an almost constant bloomer; a moderate grower; semi-hardy.

Louis Van Houtte—Beautiful maroon; medium size; full of fine shape; deliciously perfumed.

Madam Caroline Testout—Silvery rose, flowers large, double.

Mabel Morrison—White, sometimes tinged with blush; in the Autumn the edges of the petals are often pink.

Madame Gabriel Luizet—A magnificent pink rose; very large, and possesses a pleasing fragrance. Known as Hardy LaFrance which it resembles.

Madame Plantier (Hybrid China)—Pure white, above medium size. One of the best white roses for hedges and for massing in groups.

Magna Charta—Bright, pink, suffused, with carmine; very large, full and fragrant with magnificent foliage. A free bloomer.

Marchioness of Londonderry—A new white rose. Flowers of great size, perfectly formed on stout stems. Color ivory white; free blooming; perfumed.

Margaret Dickson—Of magnificent form; white, with pale flesh center; petals very large, shell shaped, and of great substance; fragrant, a fine variety; foliage very large, dark green.

Marshall P. Wilder—Cherry carmine; continues in bloom long after other varieties are out of flower; the finest H. P. rose yet produced.

Mrs. John Laing—Soft pink; large and of fine form, produced on strong stems; exceedingly fragrant; one of the most valuable varieties for forcing, and flowers continuously in the open ground. The most beautiful rose of recent introduction.



[MADAM GABRIEL LUIZET

Paul Neyron—Deep rose color; good foliage; by far the largest variety in cultivation.

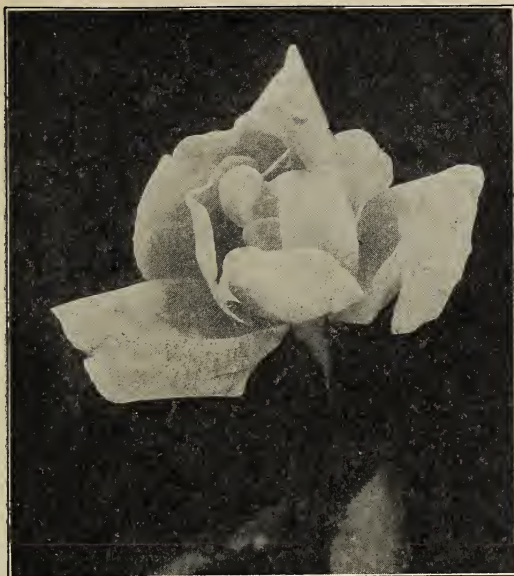
Persian Yellow (Austrian)—Deep golden yellow; double and fine.

Pierre Notting—Deep velvety crimson. A beautiful globular-shaped flower, distinct and fine.

Prince Camille de Rohan—Deep velvety crimson; large, moderately full. A splendid rose.

Soleil D'Or (Golden Sun)—The flowers are large, full and globular, fragrant; buds conical shaped; color superb, varying from gold and orange-yellow to reddish-gold, shaded with nasturtium red.

Ulrich Brunner—Brilliant cherry red, a very effective color; flowers of fine form and finish, carried well upon the plant; petals of great substance; plant vigorous, hardy and resists mildew. One of the best varieties for forcing and open air culture.



MADAM CAROLINE TESTOUT

Jonkheer, J. L. Mock—Carmine, changing to imperial pink. A novelty of distinct merit.

Juliet—Outside of petals old gold, interior rich rosy red, changing to deep rose as the flowers expand. Flowers rather large, very double, fairly fragrant.

Kaiserin Augusta Victoria—A superb white Rose, faintly tinted with cream and lemon-yellow. Large, full and double; their fragrance is peculiarly rich and delightful.

Killarney—Its color is a sparkling, brilliant pink. The blooms are large, the buds long and pointed; a Rose of unusual excellence.

Killarney White—Pure white, delicate appearance, very fine form.

Lady Hillingdon—A grand novelty, with deep apricot-yellow, long pointed buds; free-flowering and a good grower.

Liberty—Brilliant velvety crimson, of even shade throughout; perfect in every respect; excellent for outdoor and forcing.

Marechal Neil—Deep golden yellow; flowers very large and full, beautifully formed and extremely fragrant.

HYBRID TEA ROSES

Bessie Brown—Creamy white; flowers very large and full; highly perfumed.

Betty—Flowers ruddy gold; very large, of good form and blooms constantly from June until nipped by frost; very fragrant.

Dean Hole—Silvery carmine, shaded salmon; beautiful shape.

Duchess of Albany—A rich, deep, even pink tint; free blooming and fragrant.

Etoile de France—A new French variety; flowers full and double. In color it is a rich, velvety crimson, with vivid cerise-red center.

George Dickson—Black velvety crimson, retaining its color well. Large petals of good substance, lasting well.

Gruss an Teplitz—One of the brightest colored Roses grown. Dark rich crimson, changing to bright scarlet, shading to velvety fiery red. Delightfully fragrant.



LADY HILLINGDON

Maman Cochet—Color deep rose-pink, inner side of petals silvery-rose; borne on long, stiff stems; very double and exquisite when in bud.

Mme. Abel Chatenay—Rosy carmine tinted salmon; flowers large; very free-flowering.

Mme. Jules Grolez—Bright china rose; flowers large and beautifully formed; very floriferous; fine for massing and forcing.

Mme. Ravery—Orange-yellow; large and well formed; very hardy.

Mrs. Aaron Ward—A very handsome and free-flowering variety. The color is a distinct Indian yellow, and, as the flowers expand, they shade lighter to the edges.

Ophelia—Very long bud; delicate rose, heavily flushed but opening to a beautiful salmon-flesh, shaded with rose; flowers borne on strong stems.

White Maman Cochet—Identical with Maman Cochet, except in color; an ideal bedding variety.

CLIMBING ROSES

These are all hardy, vigorous growers, and bloom freely in June.

American Pillar—One of the Polyantha roses. A fine shade of pink with clear white eye. Very large flowers, produced in large clusters.

Climbing American Beauty (C)—The favorite of all roses in climbing form.

Crimson Rambler—As a climbing or running rose it has no equal. The foliage is rich, dark green, the growth rapid and diverse, but its great beauty is when the plant is covered with a profusion of the brightest crimson partly doubled flowers which remain on a long time.

Excelsa (C)—Very double; crimson maroon; flowers in large trusses.

Dorothy Perkins—A splendid new, shell-pink Climbing Rose. The flowers are borne in clusters of 30 to 40 and sometimes even 50 to 60. The flowers are large, very double, sweetly scented and of a beautiful shell pink. Hardy.

Flower of Fairfield—A sport from the notable Crimson Rambler, which it resembles in every respect, except that it continues to bloom all summer, producing a marvelous succession of brilliant crimson clusters from Spring till late Autumn. A rose of great value.

Lady Gay—The flowers are of a delicate cherry-pink color, which fade to a soft white.



DOROTHY PERKINS



CRIMSON RAMBLER

The effect of a plant in full bloom, with the combination of the soft white flowers, the cherry-pink buds, and the deep green foliage, is indeed most charming.

Philadelphia Rambler—Improvement on the Crimson Rambler, flowers being larger, much more double and of a lighter crimson color.

Pink Rambler (Euphrosyne)—Possesses the same valuable features found in the White Rambler, with which it differs only in color of flower, which is a brilliant light carmine.

Queen of the Prairie—Bright rose color; large, compact, and globular; a very profuse bloomer. One of the best.

Tausendschon, or Thousand Beauty—The flowers are the most delicate shade of pink ever seen in a Rose, might be described as a white delicately flushed pink changing to rosy-carmine. It gets its name from its many flowers and the variation in colorings.

White Rambler (Thalia)—Flowers are the size of a silver quarter, perfectly filled, very fragrant. Color pure white, sometimes tinged with blush. Blooms in clusters.

Yellow Rambler (Aglia)—A new climbing rose of the class and habit of the famous crimson rambler; flowers medium size, cup shape, nearly full, sweet scented; blooms in large clusters; color very light yellow.



THE WHITE BABY RAMBLER

MOSS ROSES

Blanche Moreau—Pure white, large; form very perfect; flowers in clusters, heavily massed. A rampant grower.

Crested Moss—Deep pink colored buds, surrounded with a mossy fringe and crest. A fragrant, very beautiful Rose.

Perpetual, White—White flowers growing in clusters; mossy.

Pink, Moss—Free bloomer. Pale rose, very beautiful buds; a great favorite.

RUGOSA ROSES AND HYBRIDS

For massing or hedge planting, the Rugosa cannot be excelled. The hybrids are attractive in the garden.

Rosa Rugosa—An upright shrub, attaining 5 to 6 feet in height. Foliage shining dark green, deeply plicated; flowers single, red, fragrant and produced freely from June to December; fruit bright crimson-scarlet.

Alba—The habit and foliage is similar to the above, but the flowers are pure white, single and as attractive in the bud as when open; quite fragrant.

Conradi, Ferdinand Meyer—This variety is a strong, robust grower; with stout stems. The flower is clear silvery rose, very large and double; delightfully fragrant.

Mme. George Bruant—This is a very free-blooming, white variety; a strong grower and blooms continuously; flowers semi-double.

DWARF BEDDING ROSES OR BABY RAMBLERS

A type of Rose which is becoming very popular for bedding purposes. They form shapely, compact, bushy specimens, about 18 inches high, producing in great profusion from early in the season until severe frost, immense trusses of small flowers.

Crimson Baby Rambler (Mme. Norbet Levasseur)—Crimson flowers similar to the popular Climbing Crimson Rambler.

Pink Baby Rambler (Anchen Muller)—Brilliant, luminous pink; a shade that is always admired.

White Baby Rambler (Katheria Zeinet)—Pure white flowers, showing the yellow stamens very prettily, produced in large candelabra-shaped trusses.

WICHURIANA AND ITS HYBRIDS

Rosa Wichuriana (Memorial Rose)—A beautiful creeping species. It grows very fast, and has small, dark, shining leaves that soon cover the ground thickly. The flowers are small, white, single and fragrant.



CRESTED MOSS

TRANSPLANTING TREES AND SHRUBS



TREES AS THEY ARE RECEIVED FROM THE NURSERY.

Preparing the Trees.—In removing the tree in the nursery row, no matter how carefully the work is done a portion of the roots are broken and the balance that existed in the tree is destroyed. To make up for this, remove the broken or mutilated portions so as to leave the ends round and smooth. Never plant a tree exactly as it is received from the nursery until it has been thoroughly examined and the necessary pruning done. Proper pruning is determined by the size, form and condition of the tree.

Standard Orchard Trees.—These trees when they leave the nursery vary from five to seven feet in height. The branches that form the head should be cut back to within three or four buds of the base. Prune the roots also as directed above. With older trees, of extra size, shorten all the previous year's growth to within three or four buds of their base; also cut away the unnecessary branches if they are numerous.

Dwarf Trees.—Trees of two or three years' growth and having a number of side branches should be pruned with an eye to the growth and the form desired. Cut the branches into the form of a pyramid by shortening the lower ones about one-half, those in the middle still shorter and the uppermost ones to within three or four buds of their base. The leader should be cut back about one-half. Closer pruning is needed on trees that have been dried or injured by exposure.

Yearling Trees Intended for Pyramids.—Cut away the smallest side branches if there are any, keeping the strongest and best placed. Those having no side branches should be cut back far enough to assure

the production of branches within a foot of the ground. A strong yearling about four to six feet in height may be cut back about half, weaker ones more than that. Cut too low rather than not low enough.

Preparing the Soil.—Fruit trees flourish best in a naturally dry soil; too much moisture retards growth. Plow at least twice, following the common plow the second time with the subsoil plow. Fresh lands will not need manure or fertilizers but lands exhausted through constant cropping should be fertilized either by turning under clover or well decomposed manure or compost. Land that is in good condition for wheat, corn or potatoes will be well adapted to fruit trees.

Planting.—Dig the hole larger than is necessary to admit all the roots in their natural position, keeping the surface soil and subsoil separate. Have the tree held in an upright position while the earth is shovelled in, the best soil being sifted in among the roots. Make sure that all the roots come in contact with the soil. When the earth is nearly filled in, pour in water to wash the soil around the roots; then fill up the remainder and tread down gently with the foot. It is only necessary to use water in dry weather.

Don't plant too deep; the trees should stand about the way they did in the nursery. Trees on dwarf stock should be planted so that all the stock is below the ground, only the graft appearing above the surface.

Staking.—Extra tall trees or those much exposed to the wind should be supported by a stake. Take care that no chafing of the tender bark occurs.

Mulching.—After the tree is set, cover the ground within a radius of two to three feet with five or six inches of manure or litter. This mulching is necessary in dry ground and is good practice in spring and fall planting.



PAIRS OF TREES SHOWING THEM AS RECEIVED FROM THE NURSERY AND AFTER BEING PRUNED FOR PLANTING. 1 KIEFFER PEAR; 2 PEACH; 3 DWARF DUCHESS; 4 QUINCE.

Pruning.—All fruit trees require more or less pruning from year to year. While the tree is young the head should be formed, and unnecessary branches taken out. The best time to prune is late in the winter or in early spring, when no more severe weather is anticipated.

Carrying Stock through the Winter.—The practice of procuring supplies of trees in the fall is becoming more and more general. It is a more favorable time than spring, because the stock has just entered into dormant condition. Even when fall planting is not desirable by reason of severity of the climate, the stock may be procured in the fall, and thus be on hand ready for the opportune moment in the spring.

To insure success you have only to get the trees before freezing weather, and bury them in the following manner: Choose a dry spot where no water will stand during the winter, with no grass near it to invite mice. Dig a trench, throwing out enough dirt to admit one layer of roots below the surface, and place the trees in it, inclined at an angle of forty-five degrees or more. Widen the trench, throwing the soil among the roots in position, place another layer in the trench, reclining the tops on the others, and so on until all are in the trench; then finish by throwing up more soil until the tips of the trees are nearly or quite covered. It is also well to bank up the earth around the sides to insure more thorough protection. The exposed tops should then be covered with pine boughs, which insures them against any possibility of injury. Care should be taken to fill solid all the interstices among the roots. Too much care in doing this cannot be insisted upon, as every root which is not in close contact with the soil is sure to be killed. In the spring the trees will be on hand for transplanting at the earliest moment possible to do the work.

Care of Stock Injured by Frost or Long Exposure.—Place the unopened packages in a cellar or any cool place that is free from frost. Leave them there until the stock is thawed out. It can then be unpacked and planted or "heeled in."

If dried out from long exposure, bury in the ground, or soak in water from 12 to 24 hours. Prune such stock more closely than ordinarily.

SPRAYING

Once a plant is attacked by disease it cannot be cured in the same sense that an animal can be. Spraying aims not to cure diseased plants but to protect them from two classes of enemies, insects and fungus (fungi, plural). The purpose of spraying is then to render plants immune against the insects or fungi to be feared. The spray mixture must be injurious to the enemies it is designed to forestall.

There are three main considerations in spraying: An effective spraying machine, one adapted to the character of the work; a mixture that will defeat the enemy; and a knowledge of the proper time to spray. The first can be secured through the manufacturers whose advertisements appear in fruit-growing magazines, the other two are explained in detail in the following paragraphs.

The principle underlying spraying is to cover the foliage or wood of plants with a medium in which the fungus will not grow, in the case of the plant parasite, or one which will poison the leaf-eating insect or kill the sucking insect by destroying its body. Both diseases and destructive insects work rapidly and a delay of a few days may make the remedy ineffective. Of all factors making for success in spraying promptness is the most important.

We advise careful attention to these five points: (1) Know the enemy you are attacking; (2) study the remedy, its principles—how it acts; (3) secure the proper appliance for using the remedy; (4) prepare the spray mixture carefully; (5) apply it thoroughly.

AMMONIACAL COPPER CARBONATE

Copper Carbonate.....	5 ounces
Ammonia	2 quarts
Water	50 gallons

Prepare and keep in large bottles.

ARSENITE OF LEAD

Lead Arsenite.....	1 pound
Water	150 gallons

ARSENITE OF LIME

This is much cheaper than Paris Green and equally efficient. It will not burn the tenderest foliage.

Formula (for 800 gallons)

Arsenic, White	2 pounds
Sal Soda	8 pounds
Water	2 gallons

Boil all together for 15 minutes or as long as it takes the arsenic to dissolve. The result is a concentrated solution that can be diluted as needed. One pint together with 2 pounds of lime added to a barrel of water makes an insecticide as good as Paris Green.

BORDEAUX MIXTURE

(Standard formula)

Copper sulphate (Blue Vitriol)	4 pounds
Lime (fresh)	4 pounds
Water	50 gallons

Use about half of the water to dissolve the Copper sulphate. Do this by suspending the crystals near the surface in a bag of coarse material. Put the lime in another vessel, adding small amounts of water from time to time until the lime is thoroughly slaked. Then add the remainder of the fifty gallons (about 25 will have been used for the copper sulphate, 1 or 2 for slaking the lime; use the remainder—23 or 24 gallons—for diluting lime).

Have a large vessel capable of holding fifty gallons and into this pour at the same time, the lime solution and the copper sulphate solution. The spray tank or barrel may be used for this purpose. The best mixture is made by straining the solutions as they are poured. This can be done either with a coarse cloth or fine-meshed wire screen.

COPPER SULPHATE SOLUTION

Copper sulphate.....	1 pound
Water	25 gallons

Since this is injurious to foliage it should only be used before the foliage appears. It acts as a general germicide and disinfectant.

HELLEBORE

White Hellebore, fresh	1 ounce
Water	3 gallons

KEROSENE EMULSION

Hard Soap	1/2 pound
Water, boiling	1 gallon
Kerosene	2 gallons

First dissolve the soap in hot water, add the kerosene and stir or churn thoroughly until the mixture becomes white and creamy. Dilute this solution four times for San Jose; twenty times for Aphid.

LIME-SULPHUR

The lime-sulphur solution seems destined to take the place of the Bordeaux mixture and many other copper sprays that have been in use a long time.
(For the best information about Lime-Sulphur send for Penn. Expt. Sta. Bulletin 92, July 1909; or their latest bulletin on the subject.)

Lime, fresh	15-20 pounds
Sulphur, flowers	15 pounds
Water	50 gallons

Place lime in an iron kettle over fire and slake with about 8-10 gallons of water. Add the sulphur and salt then thoroughly. Boil the mixture for from forty to sixty minutes and stir constantly. Do not add any more water than is needed to keep the mixture from sticking and burning. Strain the mixture and add enough hot water to make 50 gallons. Always apply hot! After the mixture has been allowed to cool, crystals form which can only be dissolved by heating.

Before using Lime-Sulphur we advise a thorough understanding of it. This can be obtained from the bulletins of numerous Experiment Stations and from fruit-growing magazines.

PARIS GREEN SOLUTION

Mix 1 pound of Paris Green in 200 gallons of water; stir well and keep well stirred while it is being applied

SOLUBLE OILS

These require only the addition of water before applying. Use only those recommended by good authority. They take the place of Lime-Sulphur and have not its disadvantages.

TOBACCO SOLUTIONS

These can be prepared by boiling tobacco stems in water, two gallons to each pound of stems. Good for sucking insects.

Commercial solutions can be obtained. Use according to directions accompanying them.

GRAFTING WAX

A good grafting wax is made as follows: Resin, 4 parts; Bees' Wax, 2 parts; Tallow, 1 part. All by weight. This material should be carefully melted together, mixed, and when hot, poured into a pail of cold water. As soon as it is hard enough to handle, the lump should be pulled until it becomes light colored. In doing this the hands should be greased, care being taken not to use too much grease. When first taken from the water, the mixture will be a spongy mass. Unless the resin is thoroughly melted, the wax will be lumpy.

GOVERNMENT PUBLICATIONS

Write the "Superintendent of Documents, Washington, D. C." for a list of the publications issued by the Government. The prices and directions for securing any of the publications listed are given therein.

COLLEGE AND EXPERIMENT STATION LITERATURE

Write the Mailing Clerk or Extension Department of any agricultural college for their bulletin on the subject desired and it will be sent, if still in print. The same holds true of Experiment Stations which are often in connection with the colleges.

TABLE OF DISTANCES FOR PLANTING TREES

Apples. Standard, 30 to 40 feet each way.	Nectarines. 16 to 18 ft. each way.
Apples. Dwarf, 15 ft. each way.	Quinces. 12 ft. each way.
Pears. Standard, 20 to 25 ft. each way.	Currants. 3 to 4 ft. each way.
Pears. Dwarf, 15 ft. each way.	Gooseberries. 3 to 4 ft. each way.
Cherries. 13 to 20 ft. each way.	Raspberries. 3 to 4 ft. each way.
Plums. 16 to 18 ft. each way.	Blackberries. 6 to 8 ft. each way.
Peaches. 16 to 18 ft. each way.	Strawberries. 1 1/2 ft. to 3 ft. each way.
Apricots. 16 to 18 ft. each way.	Grapes. 8 to 10 ft. each way.

NUMBER OF TREES OR PLANTS FOR AN ACRE OF GROUND, SET AT REGULAR DISTANCES APART

Distance Apart.	No. of Plants	Distance Apart.	No. of Plants	Distance Apart.	No. of Plants
7 inches by 3 inches ...	696,960	4 feet by 3 feet	3,630	13 feet by 13 feet	257
4 inches by 4 inches ...	392,040	4 feet by 4 feet	2,722	14 feet by 14 feet	222
1 inches by 4 inches ...	174,240	4 1/2 feet by 4 1/2 feet	2,151	15 feet by 15 feet	193
9 inches by 9 inches ...	77,440	5 feet by 1 foot	8,712	16 feet by 16 feet	170
1 foot by 1 foot	43,560	5 feet by 2 feet	4,356	17 feet by 17 feet	150
1 1/2 feet by 1 1/2 feet	15,370	5 feet by 3 feet	2,904	18 feet by 18 feet	134
2 feet by 1 foot	21,780	5 feet by 4 feet	2,178	19 feet by 19 feet	120
2 feet by 2 feet	10,860	5 feet by 5 feet	1,742	25 feet by 25 feet	69
2 1/2 feet by 2 1/2 feet	6,920	5 1/2 feet by 5 1/2 feet	1,417	30 feet by 30 feet	48
3 feet by 1 foot	14,520	6 feet by 6 feet	1,210	33 feet by 33 feet	40
3 feet by 2 feet	7,260	7 feet by 7 feet	881	40 feet by 40 feet	27
3 feet by 3 feet	4,840	8 feet by 8 feet	680	50 feet by 50 feet	17
3 1/2 feet by 3 1/2 feet	3,555	10 feet by 10 feet	435	60 feet by 60 feet	12
4 feet by 1 foot	10,899	12 feet by 12 feet	302	65 feet by 66 feet	10
4 feet by 2 feet	5,445				

To estimate the number of plants required for an acre at any given distance, multiply the distance between the rows by the distance between the plants, which will give the number of square feet allotted to each plant, and divide the number of square feet in an acre (43,560) by this number and the quotient will be the number of plants required.

SPRAY CALENDAR

WHAT TO SPRAY FOR	SPRAY TO USE	REMARKS
San Jose Scale, Scurfy Scale Bud Moth, Eggs of Apple Eggs of Red Spider [Aphis Green Peach Aphis Oyster Shell Scale Peach Leaf Curl Pear Leaf Blister Mite Strawberry Leaf Blight	Lime Sulfur Winter strength	Apply while buds are swelling to Apples, Pears, Peaches, Plums and Cherries and small fruits, using the winter strength lime sulphur drenching all parts of the tree. Test both the commercial and homemade lime sulphur with hydrometer before using to secure the correct strength. The tree must be completely covered with winter strength lime-sulfur when spraying for scale insects. Coat every portion from ground to tip of twigs. Apply when new leaves start. Repeat every 10-15 days until flowers appear. Burn leaves as soon as crop is harvested.
Thrips	Lime Sulfur Summer strength Nicotine Extract (2.7 per ct.) 6 qts. Water 100 gals. Soap 2 to 5 lbs.	The period for effective spraying against the adult thrips, is during the time when the buds are swollen and partly open, and until they are entirely open at the tips. Spray for the larvae after the petals drop to reduce the number of insects for the following year.
Apple Scab Black Rot of Apple Brown Rot of Prune Bud Moth Caterpillars Codling Moth	Lime sulphur Summer strength and Arsenate of Lead 3 lbs. to 50 gallons	First application. Just before blossoms open, for apple scab and various leaf-eating insects, use lime-sulphur solution (32° Beaume) diluted with 40 parts of water, with 2 to 3 pounds arsenate of lead to 40 gallons. Second application. When blossoms are about two-thirds off, give same treatment as (2). This is the most important spraying for apple scab and codling moth. Should never be omitted. Third application. About two weeks later repeat (2) if weather is favorable for apple scab; that is, moist and warm. Fourth application. About first week in August repeat (2) to prevent late infections of apple scab and to control second brood of codling moth.
Canker (N. Y. Apple) Mildew, apple Scab, apple and pear Grape Rot and Anthracnose	Lime Sulfur Summer strength	PEARS Spray as for apples. As foliage appears to be more susceptible to injuries by the spraying mixture, dilute the concentrated lime-sulphur solution (32° B.) in the proportions of 1 to 50 and apply the liquid in minimum quantities, using nozzles with fine apertures. See Arsenate of Lead for combination spray.
Plum Curculio	Lime Sulfur Summer strength Arsenate of Lead	Apply when leaves are half grown; Just before blossoming; When fruit has set. Repeat once or twice at intervals of two weeks. If latter applications are necessary use ammonical copper carbonate solution.
Aphis on trees & garden crops Leaf Hopper Oyster Shell Bark Louse Red Spider Woolly Aphis on Branches Peach Brown Rot Peach Scab Raspberry Cane Blight Apple Cankers, Aphis Eggs Pear Leaf Blister Mite Red Spider Eggs Tent Caterpillar Eggs Woolly Aphis Grape Mildew	Kerosene Emulsion or Tobacco Black Leaf Lime Sulfur Selfboiled 8-8-50 Resin-Bordeaux Lime Sulfur Winter strength	PLUMS First application. When "husks" or calyces drop, spray with arsenate of lead. 3 lbs. to 50 gals. of water for the curculio. For leaf spot on European varieties use bordeaux mixtures 5-5-50 with arsenate of lead. Second application. For leaf spot repeat spraying with bordeaux mixture about ten days later. Japanese varieties of plums should be sprayed as directed for peaches
Tussock Moth	Flowers of Sulfur	CHERRIES Spray as for plums for San Jose scale and the curculio. PEACHES First application. When "husks" or calyces are dropping use two pounds of arsenate of lead to fifty gallons of water for the curculio. The self-boiled lime-sulphur mixture may be used as carrier of the poison to control also brown rot and scab. Second application. Two or three weeks later use 88-8-50 self-boiled lime-sulphur mixture and two pounds of arsenate of lead. Third application. About one month before fruit ripens repeat treatment with self boiled mixture, omitting the poison.
Crown Gall Fire Blight Raspberry Cane Blight Strawberry Crown and Root Borers Leaf Rollers	Band trees Destroy infected parts See notes	These are contact insecticides and should be applied to exposed and tender bodies of young. These are all sucking insects and food poisons are of little value. Be sure to penetrate covering of woolly aphids; be thorough, do not allow any to escape. Spray four weeks after blossoms have fallen, again in three weeks and about one month before fruit ripens. Apply just after leaves have fallen. Spraying in spring before buds open may be substituted for this for combating insects and fungus pests. However, it may be desirable to apply in fall on account of rabbits.
		For mildew on grape use finely pulverized sulfur. Dust ground and vines freely on a bright morning. This should not be applied while the weather is damp or the vines wet. Band trees with tanglefoot or strips of raw cotton, binding it in the middle, leaving band loose above or below. Do not apply sticky preparations directly on bark of trees. Use bands during June, July and August. Remove egg clusters which appear in masses as a white froth. Crown Gall is a bacterial disease of root or crown of trees. All infected trees should be destroyed. Keep a constant lookout for this trouble. Fire Blight bacteria may extend below discolored or blackened region, hence cut should be made about one foot below. Disinfect knife and wound with mercuric bichloride one part to 1000 parts of water. Strawberry plants should be dug up and burned before May 1 to destroy insects before beetles escape to lay eggs. For strawberry leaf roller burn top as soon as crop is gathered.

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